

TEXTILE BULLETIN

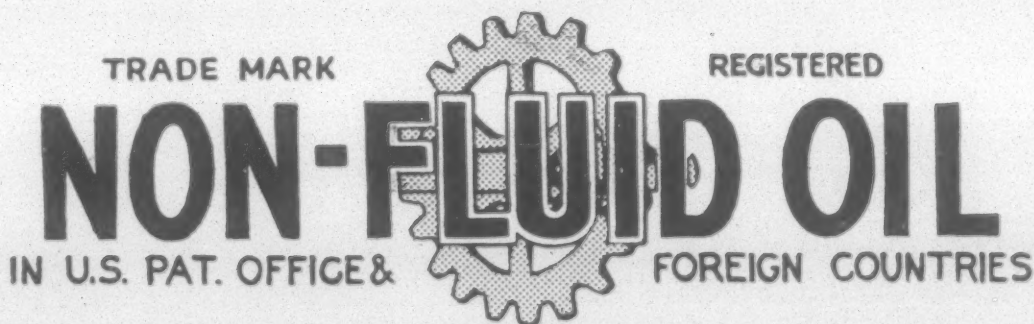
VOL. 62

JUNE 1, 1942

NO. 7

Secure Greatest Production

By Using—



CARDS, SPINNING FRAMES and **LOOMS** mean more to you today than ever before. They are **PRODUCTION** capital you can't replace. Safeguard their efficient operation and protect them from wear with **NON-FLUID OIL** — the drip-less, waste-less lubricant. **NON-FLUID OIL** gives more dependable protection — stays in bearings and off goods, outlasting oil 3 to 5 times.

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SONOCO hits stride in war production

For the second time in 25 years SONOCO is turning on the heat for Uncle Sam.

We are turning out a dozen different war items in three plants—and in Canada.

We are much better prepared than in 1917—ten times better.

Our vital production of paper carriers for the textile industry has been increased 20% since December 7th.

On the war front, on the home front, on the civilian front, we are meeting all demands expected of a dependable source of supply.





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There are 435,000 reasons



... why you may soon be using Accotex Aprons

APPROXIMATELY 435,000 spindles are now equipped with Armstrong's Accotex Aprons. Every one of them is a good reason why *more and more* spindles will be Accotex-equipped. For they are spinning better yarn . . . giving mill operators a convincing demonstration of Accotex superiority over old-type Aprons.

Here are the six outstanding qualities of Accotex Aprons which make them superior:

SEAMLESS: Accotex Aprons have no seams to break open and shorten life.

NONSTRETCHING: Accotex Aprons are reinforced with a sturdy interliner . . . eliminating loss of operating efficiency due to stretching.

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GOOD FRICTION SURFACE: Accotex Aprons provide a uniform "grip" that keeps slippage at minimum. Thus they aid maximum production of a high quality yarn.

Armstrong's Accotex Aprons are *perfected* aprons. Years of research, testing, and field checking preceded their introduction to the textile in-

dustry. They're made of a non-oxidizing and highly oil-resistant compound developed specifically for textile manufacturing. Many Accotex Aprons now in use have given over two years' service and show little evidence of wear.

You can get prompt delivery on Accotex Aprons, so why not see your Armstrong representative right away for full details? Armstrong Cork Company, Industrial Division, Textile Products Section, 921 Arch Street, Lancaster, Pennsylvania.



ARMSTRONG'S ACCOTEX APRONS
CORK COTS • ACCOTEX COTS

WHEN SO LITTLE CAN DO SO MUCH

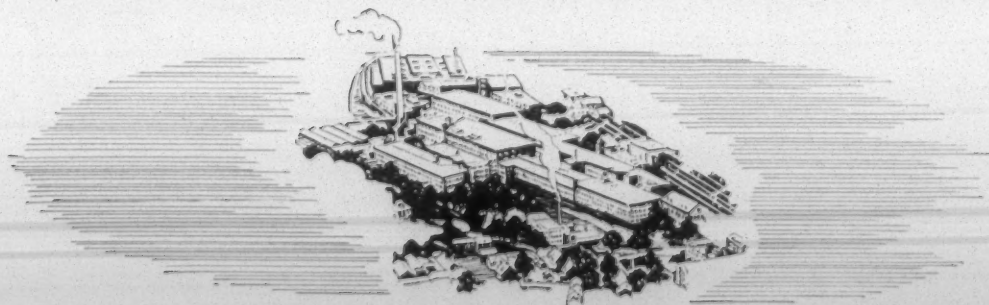
- There might be an honest difference of opinion as to the concrete value of salvaging old razor blades and empty tooth paste tubes in the all-out war effort.
- There is absolutely no question about the vital need for full production from our textile mills to meet our service requirements and the essential civilian market needs.
- War conditions must rule out the possibility of purchasing new machinery for many cotton mills. This puts a spotlight on their existing equipment.
- In no department in a mill can so much be gained by so little in expenditure of both material and money as in the application of the Whitin improved drafting systems to roving and spinning frames. With these systems, a mill is able to turn out an equal yarn production with no sacrifice in quality, and with the use of fewer preparatory machines in the roving process.
- The flexibility of a mill is greatly increased when improved drafting systems are installed. In the present emergency, which finds some mills ill-equipped to produce yarn counts for which there is demand, the solution is often the adaptation to present machines of the modern Whitin drafting systems.

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With the same products...the same policies...the same personnel you have known in the past.

AS OF JUNE 1, 1942, The R. & H. Chemicals Department of Du Pont will be designated as the Du Pont Electrochemicals Department. This involves no change in the products you use, the policies you know or the people who serve you. The same experienced group of chemists, engineers and others will continue to further your interests through research, development, control, service and production. The development of new and better chemicals will remain a primary objective.

The products of the Electrochemicals Department will be, as before, a line of specialized chemicals derived principally from salt. In addition, it will continue to manufacture other specialties such as formaldehyde and its derivatives, polyvinyl alcohol, polyvinyl acetate, and ceramic colors and decorations.

The products of the Du Pont Electrochemicals Department are important in practically all branches of industry:

Chlorinated Solvents—for dry-cleaning, metal degreasing, extraction of oils and many other uses.

Peroxides—for bleaching, pharmaceutical and cosmetic preparations, general oxidation purposes.

Cyanides—for steel treating, electroplating, metal cleaning, fumigation, organic synthesis.

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Sodium, 99.9%—reactive chemical for industrial and laboratory work.

Formaldehyde and its Derivatives—for plastic manufacture; disinfecting; embalming fluid, treating paper, leather, textiles; chemical synthesis.

Electroplating Chemicals and Proc-

esses—for decorative and protective coatings on metal parts.

Ceramic Materials—for manufacture and decoration of glass, china, tile, terra cotta, porcelain.

Miscellaneous Chemicals—for Plating, Refrigeration, Plastics, Ceramics, Extermination, Rubber, Textile, Leather, Paper, Pharmaceutical and Process Industries.

Our Technical Service will continue to cooperate with you in every way possible. You may find it even more helpful in today's emergency. Technically-trained men are at your service with the practical experience necessary to answer your questions on the use of specialties and specialized electrochemicals. They are ready to work with you in your plant or in our research laboratories.



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DOC STEELSTRAP REPORTS ON WAR SHIPMENTS OF THE TEXTILE INDUSTRY

REPORT NO. 1: ACME BALE TIE BANDS SAVE SPACE — CUT TARE WEIGHT —

Conservation of shipping and storage space is a vital part of the war program. Acme Bale Tie Bands, when used for baling, make possible the compressed type of pack which permits utilization of maximum shipping and storage capacities. In addition, tare weight is reduced—shipping costs are lowered.

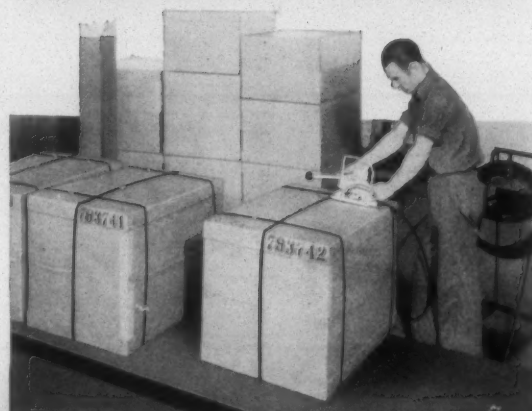
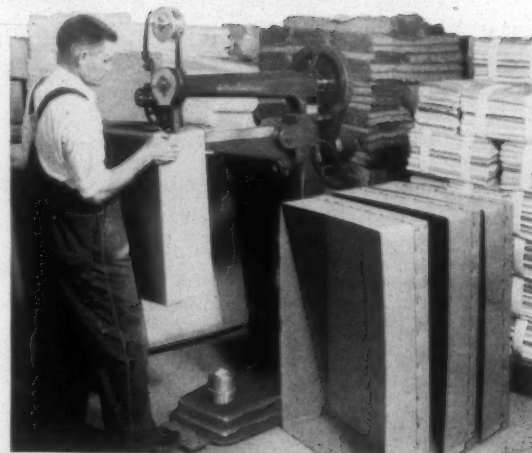
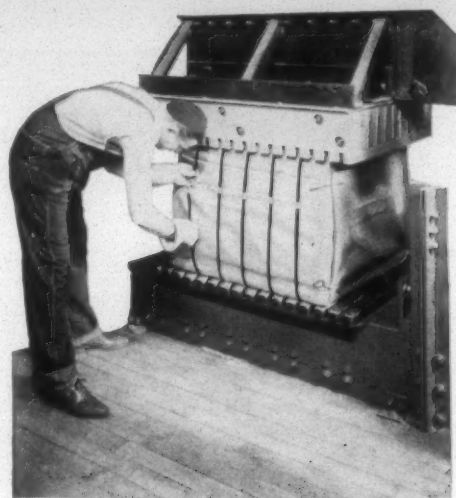
REPORT NO. 2: ACME SILVERSTITCHERS ASSURE SPEEDIER, FASTER, LOWER-COST BOX STITCHING

V-shipments move faster when Acme Silverstitchers are installed in the shipping room to provide easier and faster box stitching. And many concerns cut their sealing costs by as much as 50%. Acme stitching wire and equipment assure stitching satisfaction and are built to perform as a unit. There is an Acme Silverstitcher for every carton stitching application.

REPORT NO. 3: ACME STEELSTRAP PROTECTS CRITICAL LIST PRODUCTS, SPEEDS SHIPMENTS

Safety and speed are essential for Victory shipments. Reinforced with Acme Steelstrap, textile shipments are assured of maximum protection—faster, easier handling—more economical delivery. Cartons illustrated at right are speedily steelstrapped with the one-piece Acme 205 Steelstrapper. The time and energy-saving coil holder is conveniently located and is easily moved.

Be sure that your Victory products arrive safely, speedily and economically. Write today for full information on Acme Steelstrap, Bale Tie Bands and Silverstitchers. There is no obligation.



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..with Culofix

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With priorities . . shortages . . substitutes and the growing scarcity of high grade colors bringing many other problems, there's no need to put up with bleeding in water of direct color dyeings. Whether the trouble occurs while the fabric is batched up after dyeing; in the finishing bath; or any other place where fastness to water is necessary . . the cure is Culofix

Used as an after treatment, Culofix prevents such color bleeding in all rayons, cottons and mixtures . . either cloth or hosiery. It is especially valuable for preserving crisp detail and contrast in prints. Ask us how you can try it.

Arkansas Co., Inc.

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Manufacturers of Industrial Chemicals for over 35 Years

Guest Editorial

UPWARD AND THE FUTURE

Oh! I have slipped the surly bonds of earth,
And danced the skies on laughter-silvered
wings;
Sunward I've climbed, and joined the tumbling
mirth
Of sun-split clouds—and done a hundred
things
You have not dreamed of—wheeled and soared
and swung
High in the sunlit silence. Hov'ring there,

I've chased the shouting wind along, and flung
My eager craft through footless halls of air.
Up, up the long, delirious, burning blue,
I've topped the wind-swept heights with easy
grace,
Where never lark, or even eagle, flew—
And, while with silent, lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand and touched the face of God.

One night some weeks ago it was my good fortune to run across the above inspired lines before taking plane next morning from New York to Atlanta for the recent meeting of the American Cotton Manufacturers' Association. They were penned by Pilot Officer John G. Magee, Jr., of the Royal Canadian Air Force to his mother in Washington before his death in active service in 1941.

No finer expression has come out of World War II, and somehow its spirit remained with me during my flight down over the Piedmont section of the South, all of which I knew so well years ago.

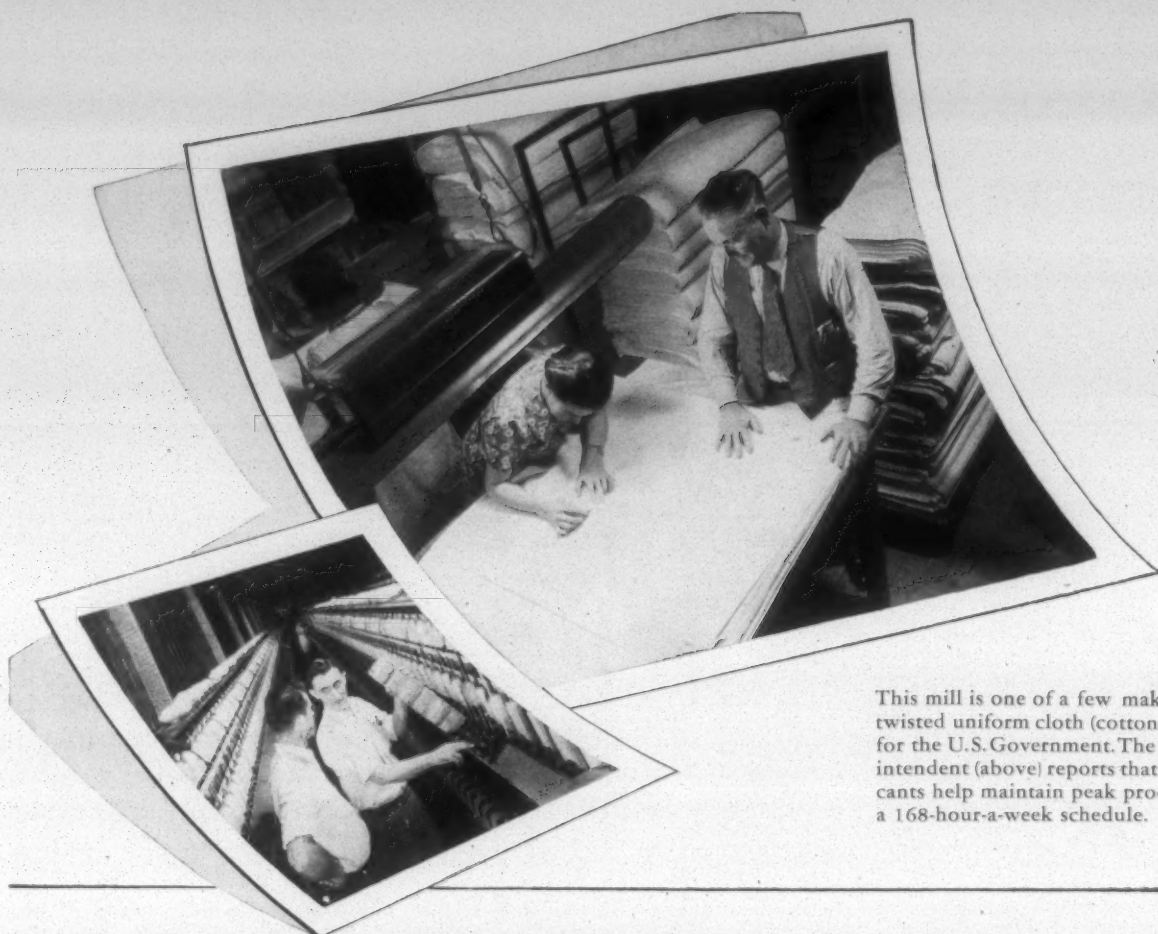
From a great height I recognized many landmarks and former cherished spots, all of course in miniature. Later in the day I remarked to a Carolina mill friend—one who has made a great success of a large textile plant which I passed over—that whenever an unwonted pride tugged at his shirt bosom he should go aloft and see what a mere mite his domain appears in the great scheme of things below.

I came back in easy stages—via train, bus and auto. I talked with all manner of peoples—mill owner and mill hand, soldiers and flyers, old and young negroes; also, relatives and friends of long ago—an aunt eighty-five and my old school

teacher ninety-three, two great souls who from their earthly abode daily put out their hands and “touch the face of God.”

I found the South war-conscious to a high degree and I was impressed by the feverish activity on all sides for Victory. No complacency nor old South sun-sitting lethargy I had known. Upon reluctantly leaving the South, my thoughts turned to the future days of peace which God grant may soon come. And with it must there necessarily be a reversion to “peace as usual” carrying the old inefficiency, ennui and neglect? Can we not hold the girded loin and carry on with some semblance of war activity, for a better peace, better farms, better mills, better homes and better lives for all America? If we subside again into an ignoble quietude, it will seem to prove that war is necessary to arouse us from our complacency and bestir us to higher things. War may be the bitter medicine or fiery crucible required for human advancement, but I dislike to admit the argument for the “biological need of war.” May we refute it during the coming opportunity. Otherwise we will find Victory soon bereft of its laurels as in World War I.

Wm. H. Harriss
Sanforizing Dept. Cluett, Peabody & Co.
New York



This mill is one of a few making heavy, twisted uniform cloth (cotton and rayon) for the U.S. Government. The mill Superintendent (above) reports that Gulf lubricants help maintain peak production on a 168-hour-a-week schedule.

*"Gulf Quality Lubricants
are helping us maintain uninterrupted production
of this 'Government' cloth"*

says textile mill Superintendent.

*"With proper lubrication every mill department
runs smoothly on a 168-hour-a-week schedule."*

PROPER lubrication with Gulf quality oils and greases is the basis of our effective preventive maintenance program, which enables us to maintain maximum output on a 168-hour-a-week schedule," says this mill Superintendent. "Gulf lubricants contribute to the efficient operation of all our equipment, and help us avoid production delays caused by breakdowns and mechanical troubles."

The *production value* of Gulf quality lubricants shows up today — when machines must be pushed without let-up on multiple shift schedules. For severe service proves the *greater stability and endurance* of these lubricants! They stand up and safeguard vital moving parts under continuous peak-load operating conditions — conditions which often cause excessive wear, breakdowns, and below-standard machine performance.

Let a Gulf engineer demonstrate to you—in your mill—how Gulf quality lubricants provide an extra margin of protection for your equipment—and help you secure uninterrupted production.

Gulf quality lubricants are quickly available to you through 1200 warehouses located in 30 states from Maine to New Mexico. Write or 'phone your nearest Gulf office today.

GULF OIL CORPORATION
GULF REFINING COMPANY



GULF BUILDING
PITTSBURGH, PA.

OIL IS AMMUNITION — — USE IT WISELY!



Minority Opinion on Important Labor Decision

The recent decision of the National War Labor Board, in the case of the Federal Shipbuilding and Dock Co., Kearny, N. J., has attracted much attention. The following is the minority opinion filed by the four representatives of industry, one of whom was E. J. McMillan, president of the Standard Knitting Mills, Knoxville, Tenn.

WE employer members of the Board feel that we have no alternative, as American citizens or as representatives of a Government agency, except to dissent from the directive order in this case.

Each of us is deeply concerned with the gravity of the whole labor relations situation of our country at this time. We fully appreciate the value of a unanimous decision with respect to establishing of a national labor policy. All groups are being called on to make sacrifices to preserve the nation. Knowing this, we made several proposals for the settlement of this case. These proposals were rejected. There is a point beyond which we cannot go in sacrificing sound principles of government, and this is the stand that we now take.

The issues in this case are quite clear. This is not an ordinary case. In July, 1941, the same issues were presented to the National Defense Mediation Board; a decision was rendered; the company refused to accept the recommendation of the Board and offered to turn the yard over to the Government for operation rather than agree to the contract proposed by the National Defense Mediation Board. The shipyard was taken over and operated by the Government, the recommendation of the the shipyard was turned back to the company unconditionally. During the period that the shipyard was operated by the Government, the recommendation of the National Defense Mediation Board was not enforced.

The identical issue is now brought before the National War Labor Board. The union has demanded that the employer be compelled to discharge any employee who fails to keep his membership in the union in good standing. This is the same issue that was presented to the Mediation Board, to this company, and to our Government in 1941. The only change in the present directive

order is to provide as an alternative that the employer be requested by the employee, under penalty of discharge, to deduct from his pay his financial obligation to the union.

In view of all the circumstances surrounding this case and the publicity it has received, it is plain that a decision in this case is not one merely affecting the labor relations of this one company. Much has been said about each case being determined on its own merits. Any practical person, and especially the members of this Board and those who served on the National Defense Mediation Board, know the fallacy of such statements. The National Defense Mediation Board was wrecked on this issue and the resignation of some of the labor members of that Board was predicated on the theory that a previous decision of the Board established a governing precedent. This pattern, of necessity, will have to be followed not only by this Board but by conciliation and mediation services throughout the country, and not only in the shipbuilding industry but in all industries.

Some of the arguments advanced by the majority are paradoxical. One is that when an employee voluntarily joins a union that he delegates to the officers of that union the right to make a contract which will not permit him to withdraw from the union without losing his job. We do not agree that any such inference can be drawn. We assert that if the members of a union are to be bound to pay their dues and fines to that union during the life of an agreement, each and every member should have the opportunity to say whether he wishes to be so bound, and all we ask is that such members be given such opportunity. If the contention is correct that members of a union intend to be so bound by virtue of joining a union, what then can be the possible objection to giving each of them an opportunity to express his wishes?

We are not taking a position as individuals or as employers for or against the closed shop, the union shop, the preferential shop, union maintenance or any other form of contract that any employer and union may see fit to make, provided that contract is not contrary to law. However, acting in our capacity as members of a Government

(Continued on Page 38)

COMPARATIVE TESTS OF COTTON

Manufactured Under Normal and High Speeds

On Cards Equipped with Metallic Clothing

*By G. H. DUNLAP, Research Supervisor

THE Southern Textile Association, Arkwrights, and The Textile Foundation are co-operating in furthering practical research within the mills themselves upon some of the manufacturing problems most vital to the industry. It is the function of the Research Supervisor to arrange such tests with the mills, and, upon completion, to report back to the industry any significant findings.

During recent months increased production has been urgently demanded of the industry. Because of the shortage of cards and the impossibility of obtaining new equipment, special interest has been shown in the possibility of increasing production by operating the card cylinders at increased speed, provided, of course, that this can be done without sacrifice of quality in the yarns or damage to the machines. During this emergency the cards have been a "bottleneck" slowing down the flow of textile production.

In an effort to meet the demand for the textile production necessary both for civilian consumers and for our armed forces, numerous textile plants are now experimenting with increased card cylinder speed. Many mills scattered over a wide area are giving this problem a thorough and extensive trial. In general, these experiments have upheld the practicability of such increased speeds. Numerous plants have reported to date excellent results obtained without encountering mechanical difficulties. These co-operating mills are releasing their results to the writer for publication as soon as they feel that their findings are reasonably conclusive. (Editor's Note: When Mr. Dunlap refers to card cylinder speed, it is assumed that he means speeding up also all the other parts of the card in proportion, as was the case in the other tests.)

The data presented in a condensed form in the following tables are the results of the experimentation of one of these co-operating plants. The writer takes this opportunity to commend the mill on the completeness of the report which covered every phase of the test. Its length, however, prohibits the release of the entire contents.

This test, in which thousands of pounds of cotton were processed, was conducted over a period of several months. The mill reported excellent running conditions and no mechanical trouble. The cotton tested was of the same

grade and staple and was manufactured under similar mechanical conditions, the only variable being the card speed. Classification of the test cottons and the mechanical organization used are given in Table 1, while Table 2 presents the test results in terms of waste, sliver variation, ends down and breaking strength of yarns and fabric. Each skein breaking strength of the yarn was based upon fifty breaks, while each single strand breaking strength listed was based upon four strands from each of sixteen bobbins—a total of sixty-four breaks.

Of course no one test is conclusive; however, a study of the data in Table 2 shows the waste content and strength of yarn varied little as between normal and high card cylinder speeds. In other words, this particular plant, by increasing card speeds, has succeeded in increasing its production without a sacrifice of quality.

This particular test was conducted on cards equipped with metallic clothing. It is interesting to compare these waste data with data previously obtained on a similar test run on regular wire clothing (TEXTILE BULLETIN, March 15, 1942). Mill A at cylinder speeds of 165 and 192 revolutions per minute, respectively, had waste content of 5.35 and 5.137 per cent. Mill B at speeds of 172 and 196, respectively, had waste content of 4.962 and 4.371 per cent. In the test presented here the percentages of waste were 3.45 and 3.385, respectively, at cylinder speeds of 160 and 190.

It is suggested that excessive speeds be tried with caution. In such a test the condition of the machine is a very important factor. A card in a poor state of repair cannot stand an appreciable increase in speed. Whenever speed becomes great enough to injure quality, the advantage of this increased production becomes doubtful. Some mills, upon attaining increased production by higher card speeds, are dissatisfied because tensile strength is not increased likewise. This greater strength of yarn is a worthy objective but increased production with the same strength is a big step forward. The recent order of the War Production Board which changed over many of the textile plants to manufacture defense goods in many instances will necessitate their spinning coarser numbers than heretofore. In cases where the increased card speed proves adaptable to the mill, the card "bottleneck" situation will be improved and production will be enabled to run more smoothly through the processes of manufacture.

*Professor of Carding and Spinning, Clemson College, S. C. On leave of absence.

Table 1.—Classification of cotton tested and other mechanical information.

R.P.M. of cylinder	160	190
Staple of cotton	1"	1"
Grade of cotton	S.L.M.	S.L.M.
Blend	80% Western 20% local	80% Western 20% local
Bales per mix	42	42
Pounds used in test	26208	35154
Opening layout	6 hopper feeders Gyrator Vertical opener Lattice cleaner	6 hopper feeders Gyrator Vertical opener Lattice cleaner
Pickers:		
Rear beater	Buckley	Buckley
Middle beater	2-blade	2-blade
Front beater	Kirschner	Kirschner
Cards:		
Relative humidity	49%	49%
Stripping schedule	None	None
Ounce lap fed	14	14
Actual grain sliver delivered	58.25	57.99
Pounds carded per hour	11.33	13.50
Model card (year)	1910	1910
Age of clothing	3 yrs.	3 yrs.
R.P.M. of lickerin	430	511
Front plate settings:		
Top	.034	.034
Bottom	.017	.017
Clothing of cards	Metallic	Metallic
Drawing frames:		
Type	Regular	Regular
Processes	2	2
R.P.M. of front roll:		
Breaker	381	381
Finisher	381	381
Top rolls	Metallic	Metallic
Roving frames:		
Processes	1	1
Hank roving made	3.00	3.00
	3.50	3.50
	5.00	5.00
Type	Super draft	Super draft
Spinning frames (equipped with variable speed control):		
Type	Long draft	Long draft
Top rolls	Calf skin	Calf skin
Doublings	2	2
Counts spun	25s warp	25s warp
	31s warp	31s warp
	39s filling	39s filling
25s warp:		
R.P.M. of spindle	10400 high	10400 high
	9500 low	9500 low
R.P.M. of front roll	139 high	139 high
	127 low	127 low
Ring diameter	1.75"	1.75"
31s warp:		
R.P.M. of spindle	10400 high	10400 high
	9500 low	9500 low
R.P.M. of front roll	124 high	124 high
	113 low	113 low
Ring diameter	1.75"	1.75"
39s filling:		
R.P.M. of spindle	9063	9063
R.P.M. of front roll	124	124
Ring diameter	1.4375"	1.4375"

Table 2.—Card waste, sliver variation, ends down, and breaking strength of yarn and fabrics manufactured from cotton tested under the mechanical conditions shown in Table 1.

Card Waste:	Per Cent	Per Cent
Motes and fly	1.286	1.416
Cylinder and doffer strips	None	None
Flat strips	2.110	1.902
Front fly	.054	.067
Total waste	3.450	3.385
Nep count in web (area of 35 sq. in.)	21.50	15.44
Sliver variation	Per Cent	Per Cent
Card:		
Avg. max. var. per yd.	9.46	8.69
Max. var. in 20 yds.	15.51	15.26
Breaker drawing:		
Avg. max. var. per yd.	27.51	25.00
Finisher drawing:		
Avg. max. var. per yd.	33.27	29.49
Ends down per M spindles per hour:		
25s warp	25.57	24.31
31s warp	21.20	28.36
39s filling	20.83	20.49
Breaking strength of yarns: **		
25s warp:	Pounds	Pounds
Tensile strength (skein)	73.600	73.800
Tensile strength (single str.)	.628	.640
31s warp:		
Tensile strength (skein)	60.100	59.600
Tensile strength (single str.)	.507	.486
39s filling:		
Tensile strength (skein)	44.900	44.300
Tensile strength (single str.)	.385	.375
Grade of yarn:		
25s warp	B	B
31s warp	B	B
39s filling	C+	C+
Breaking strength of cloth (grab method): **		
48x48—25s warp, 25s filling	Pounds	Pounds
Warp	40.40	44.70
Filling	36.60	37.30
56x52—31s warp, 39s filling:		
Warp	40.40	39.00
Filling	27.70	28.00

**Test under 65% Relative Humidity.



- (1) Virgil McDowell, Rosemary Mfg. Co., Roanoke Rapids, newly elected vice-chairman of the Division; W. T. Honeycutt, Sterling Cotton Mills, Franklinton, N. C.
- (2) W. C. Taylor, N. Y. & N. J. Lubricant Co., Greensboro, N. C.; Geo. Gilliam, Sterling Cotton Mills, Franklinton, N. C., Chairman of the Eastern Carolina Division; Prof. J. T. Hilton, Textile School, N. C. State College; Dean Thomas Nelson, Textile School, N. C. State College.
- (3) J. E. McGee, Rosemary Mfg. Co., Roanoke Rapids, N. C.
- (4) G. E. Moore, J. M. Odell Mfg. Co., Bynum, N. C.; D. F. Lanier, Oxford Cotton Mills, Oxford, N. C.; J. W. Cates, Edenton Cotton Mills, Edenton, N. C.; F. E. Bozeman, Jr., Whitin Machine Works, Charlotte, N. C.; D. E. Long, Oxford Cotton Mills, Oxford, N. C., newly elected chairman of the Eastern Carolina Division.

Card Speeds, Maintenance, Conversion, On Program of Eastern Carolina Group

THE Eastern Carolina Division of the Southern Textile Association held its spring meeting on Saturday morning, May 9, 1942, at the North Carolina State College Textile School, Raleigh, N. C., beginning at 10 o'clock. The chairman of the Division, George Gilliam, Superintendent, Sterling Cotton Mills, Inc., Franklinton, N. C., presided.

A stenographic report of the meeting follows:

Chairman Gilliam: This is the time for the annual election of officers for this Division, and I want to appoint a nominating committee. I ask D. F. Lanier, J. E. Shaw and M. R. Harden to serve in that capacity. They may retire at any time during the meeting and decide upon their recommendations and then present them at the close of the discussion. The officers to be elected are a chairman, a vice-chairman, a secretary, and one member of the Executive Committee to serve for four years.

New Officers

(The election of officers was held at the last of the meeting and the following were elected: Chairman, D. E. Long, Oxford Cotton Mills; Vice-Chairman, Virgil E. McDowell, Rosemary Mfg. Co.; Secretary Sydney Green, Eno Cotton Mills.)

There is a Resolution Committee, from which we should like to have a report. I think Mr. Mullen is the chairman of that committee.

T. W. Mullen, Supt., Rosemary Mfg. Co., Roanoke Rapids, N. C.: Do you want the resolution that has been prepared?

Chairman Gilliam: Yes, sir. Do you mind reading it, Mr. Mullen?

Mr. Mullen then read the following resolution:

Whereas, on November 7, 1941, Paul Blair Parks, Jr., our friend and fellow-laborer, passed from this life; and

Whereas, he was for a number of years active in the work of the Eastern Carolina Division of the Southern

Textile Association, having served as chairman and taken a leading part in our discussions:

Therefore be it resolved:

That the members of our Division do hereby express their profound sorrow at his passing;

That they express their sincere appreciation of his fine character and his bright and friendly personality, which was impressed on all who came in contact with him;

That they extend their sympathy to his wife and children and to his mother and father;

And be it further resolved that these resolutions be spread upon the minutes of our Division and that a copy of them be sent to his family.

T. W. MULLEN, Chairman,
M. V. BYERS,
G. E. MOORE,

Committee.

On motion, duly seconded, the report of the Resolutions Committee was unanimously adopted.

Chairman Gilliam: We will go right into the discussion of the questions. The first one is: "What results have you received from increasing card-cylinder speed (a) with all other speeds increased in proportion, and (b) with all other speeds remaining the same? What changes, if any, did you make in card settings?"

I think Mr. Marley was to make a report on this test of different card speeds. We should like now to hear from him.

Mr. Marley: I followed very closely, or as closely as I could, the outline which Mr. Dunlap had in making his tests; and the results I arrived at were, on some of it, slightly different from the results he had. Following his outline, this is what I have. (I am sorry to say, though, Mr. Chairman, that I have it in only one way; in other words, after increasing the cylinder speed all other speeds were increased in the same proportion.)



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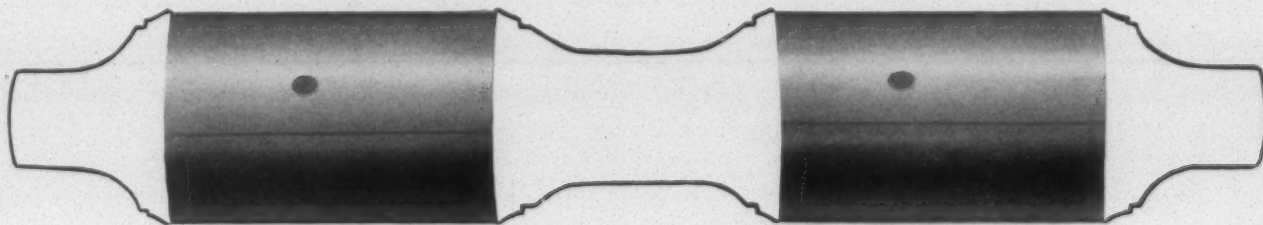
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That is only natural.

Then why don't you be *positive* that you are or *are not* using the best by checking this *sincere* claim of ours?

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Will you give us just one chance to prove it to you—for your benefit and saving?



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GREENVILLE, S. C.	RALPH GOSSETT
GRIFFIN, GA.	B. C. PLOWDEN
DALLAS, TEXAS	R. A. SINGLETON

Chairman: Well, that is probably what all of them are doing.

Card Speed Test

Mr. Marley: This test is a comparison between tests with cylinder speeds of 165 R.P.M. and 198 R.P.M., other speeds being increased in the same proportion. A careful check was made of the waste on one lap from each card, and the card sliver and the drawing sliver were tested on the sliver-testing machine. We also made tests in the laboratory for the size and breaking strength of the warp and the filling yarn. The staple of the cotton we used was, as our cotton buyer says, 1" and better. (Sometimes, however, it was just 1".) The grade was middling, and it was what we call "low country cotton"—from North and South Carolina and some from Georgia.

On the pickers, the back beater had three blades, the middle beater three blades, and the front beater was a Kirschner.

The relative humidity on the cards, at both speeds, was 58 per cent. The stripping schedule in each case was three times in eight hours. The weight of the lap fed was 13.36 ounces, with delivery of a 55-grain sliver. The number of pounds carded per hour at 165 R.P.M. was 11.84; at 198 R.P.M. it was 13.42. The year (model) of the card was 1896. The age of the clothing was somewhat different from Mr. Dunlap's. On the 165 R.P.M. card the doffer clothing was two years old and the cylinder clothing seventeen; on the fast card the clothing of both doffer and cylinder was seventeen years old.

The speed of the doffer was 10.5 R.P.M. on the slow card and 12.75 on the card at 198 R.P.M.; of the licker-in, 416 R.P.M. on the slow card and 494 on the fast. The comb speed was 1510 at 165 R.P.M. and 1935 at 198 R.P.M. I might say, in connection with the comb speed, that we tried slowing the comb down and that we were able to decrease the comb speed on the fast card back to 1600 and still take the web from the doffer. Going below that it matted up.

The front-plate settings were the same on each card, top .028 and bottom .034.

We had 5-roll drawing, one process, with a front-roll speed of 375 R.P.M. As for the top rolls, the two back were metallic and the three front were cork.

On the roving we had one process, super draft, 2.60 hank roving.

The spinning is long draft, with cork top rolls, running a double creel. The yarn counts were, in both cases, 21¼ warp and 22 filling. The speed of the spindle was 10,087 R.P.M. on warp and 8,600 R.P.M. on filling, in both tests; the speed of the front roll, 145 on warp and 167 on filling. The diameter of the ring was 2" on the warp and 1-7/16" on the filling.

As to the results we got in the way of waste, while Mr. Dunlap, I believe, counted only motes and fly strips, we counted all of it—motes and fly, cylinder and doffer strips, flat strips, clearer waste, reworkable waste, and of course we had some invisible waste. The total waste from the slow card was 6.63 per cent as compared to a total waste of 7.78 per cent from the fast card. That is a difference of 1.15 per cent more waste from the fast card than from the other.

On both the fast and the slow card the reworkable waste was 0.64 per cent, while the motes and fly were

1.02 per cent on the slow and 0.77 per cent on the fast; cylinder and doffer strips, 1.27 per cent at 165 R.P.M. and 1.02 per cent at 198 R.P.M.; flat strips, 3.32 per cent on the slow card and 4.59 per cent on the fast one; clearer waste, 0.03 per cent at the slower rate and 0.02 per cent at 198 R.P.M.; and the invisible was 0.35 per cent at 165 R.P.M. and 0.74 on the other card. You note the differences there.

As I go over this, if there is any question anybody wants to ask I shall be glad to try to answer it. If I cannot, maybe someone else can.

In testing the card sliver for variation we made five charts, each of which represented 18 yards of sliver. The 18 yards were made up of 6 yards from the top of the can, 6 yards from the middle of the can, and 6 yards from the bottom of the can. The figures I shall give you are the average of those five charts, representing 90 yards. On the drawing the same thing applies, except that we had six charts, or a total of 108 yards.

On the card sliver, the average maximum variation in 18 yards was 12.39 per cent with the slow speed and 11.51 per cent with the fast, the maximum variation in 18 yards being, respectively, 26.29 and 25.61 per cent. In the drawing sliver, with the 165 R.P.M. speed there was an average maximum variation of 25.22 per cent in 18 yards, with 24.24 per cent at the faster speed. The maximum variation in 18 yards was 38.71 per cent at the lower speed and 36.75 per cent at 198 R.P.M. In each case it ran better for us.

We also tested the roving and, of course, our sliver being 2.60 hank, we had to run double on the testing machine. Just for the sake of comparison, it might be said that the roving from fast carding showed 1.43 per cent less variation per yard, in 20 yards, than the slower carding, and there was 0.02 per cent less maximum variation.

On our yarn sizings I am giving you the laboratory test, because we feel that is more accurate, though we also measured the yarn in the mill. It is an average of 64. The size of the warp yarn averaged 20.84 for the slow and 20.93 for the fast; the filling ran 21.20 and 21.19. That was pretty close.

Breaking strength—the actual breaking strength of the warp yarn from the slow carding was 98.72; corrected to 21¼, 96.81, as against 98.23, on the fast carding, corrected to 21¼, 96.75. We just could not get a better breaking strength. There is not much difference, of course, but we could not improve it.

On the filling it did increase the breaking strength a very little. On the slow carding it was 89.47, corrected to 22, 86.22; on the faster carding it was 90.25, corrected to 86.93. You see the difference between 86.93 and 86.22 is rather small.

We also checked to find the variation in the yarn number and found that on our warp we had 22.22 for the highest and 20.00 for the lowest, or a variation of 2.22. That was the same on both the fast and the slow carding. On the filling we had a high of 24.10 and a low of 19.42 on the slow carding, giving a variation of 4.68, while on the fast carding the high was 22.47, the low 19.16, and the variation 2.86.

I might say that we had a difference in the running time. The running time of the lap on the slow card was 3

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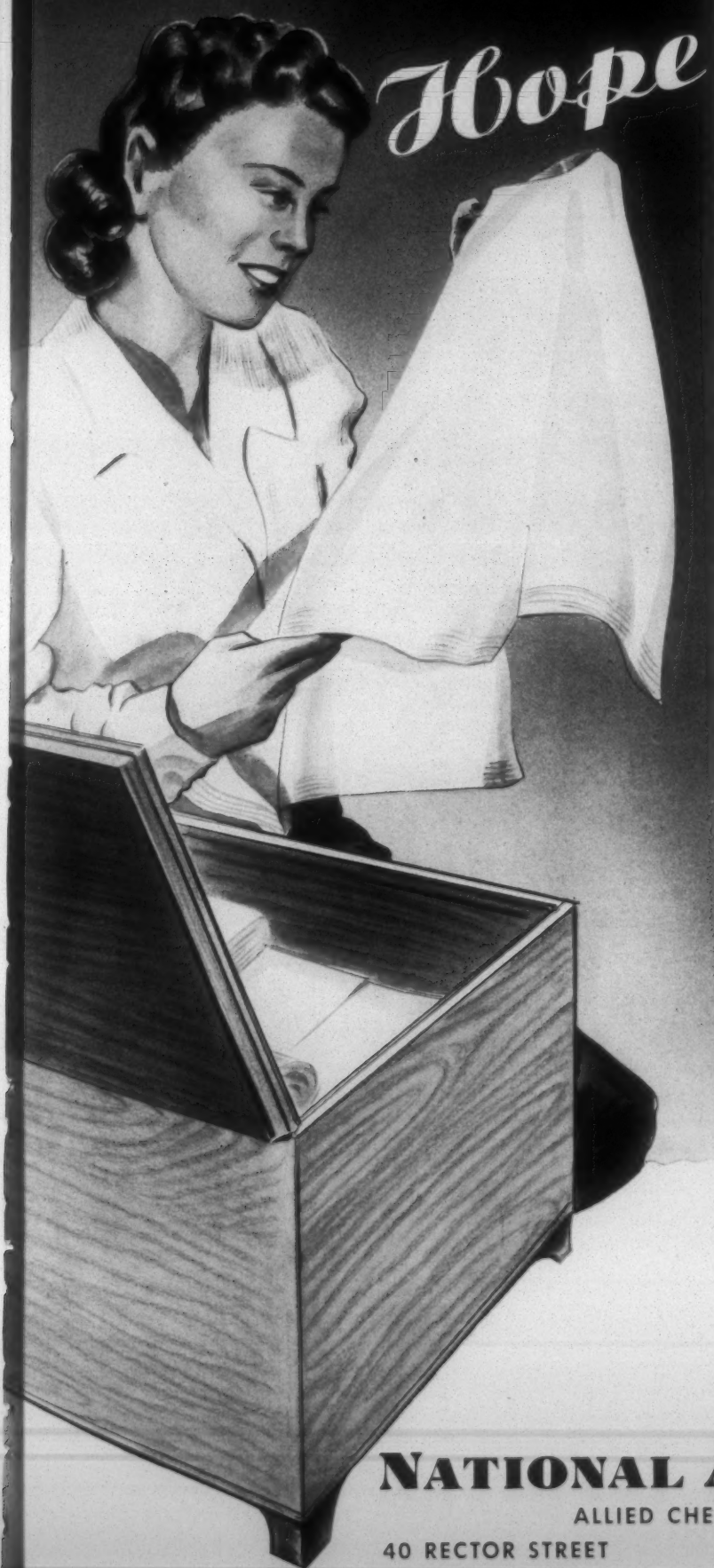
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South Carolina Group Discusses War Problems, Worker Training

THE South Carolina Division of the Southern Textile Association held its spring meeting at the Parker District High School, Greenville, S. C., on the morning of April 25th, with a large crowd in attendance. W. W. Splawn, The Kendall Co., Pelzer, S. C., general chairman of the Division, presided.

This is the third section of the report of this meeting, which in the first two sections included talks by Dr. James C. Kinard, of Newberry College, and Lt. Kelly E. Traynham, Q.M. Depot, U. S. Army. Other discussion centered around the training of workers to take the place of those drafted into the armed services or otherwise lost to the industry. With Frank D. Lockman, Jr., presiding, the discussion immediately preceding the following stenographic report was concerned with the treatment of warps with chemicals during the present emergency.

Chairman Lockman: You cannot weave your yarn if you just coat it instead of penetrating it; everyone knows that. Has anyone anything else to say on that?

The last question on our printed list is: "When you order a necessary quantity of frog rubbers for your looms and receive only 10% of the order, what do you substitute for the other 90%?"

I think that would apply to anything we order. When you order something for your looms and they send you only 10 per cent of the order, what do you do for the other 90 per cent? When you are really up against it and need something what do you do?

Frank D. Lockman: Who has a substitute for frog rubbers? What can you use there instead of rubber? Does anyone know of anything else that can be used there, or does anyone use anything else? You know rubber is getting scarce, and we shall all probably have to use something else instead. Have you tried anything except rubber, Mr. Jones?

Mr. Jones: No, I have not. But rubber is a critical item, and we shall have to get a substitute.

Mr. Royal: What is the life of a rubber bumper?

Chairman Lockman: How long will a rubber bumper last?

Mr. Hammond: I asked my weaver what he did, and he said he just used the frog and left the rubber off. There is a rubber plant up here at Hazelwood that is a subsidiary of the Dayton Co., and it is making a substitute. It has not any rubber in it at all. It is the best thing I have seen, I think, in the way of a picker. It has rubber in it, and salt.

Chairman Lockman: What do you term the "rubber?" Is that something similar to the Dayco roll?

Mr. Hammond: No. There is a little fibre in there, and other materials. It beats anything I have ever seen on a high-speed loom. If anybody is interested I shall be glad to answer a communication, although I am not an agent of that plant. But it is the best thing I have seen.

Mr. D.: Speaking of frog rubbers, I have seen other things; I have seen a layer of rubber and a layer of leather. So I imagine it will be possible to improve frog rubbers by taking the old ones and splitting them up and putting in a layer of leather.

Chairman Lockman: Will leather do it alone?

Mr. D.: I had trouble with an X Model loom once in a plant, where the loom side split. I wrote the Draper people about it, and they sent us some of these frog rubbers with a layer of leather in them. So, since leather will do, I do not see why we should not stretch our rubber and make it last longer by putting in some leather. The leather is thin.

Chairman Lockman: About 3/16?

Mr. D.: Yes.

Chairman Lockman: Is there anything else on that? If not, we have finished the discussion of our printed questions and have a few minutes for discussion of other things, if anyone has anything to say.

David Clark, Editor, Textile Bulletin, Charlotte, N. C.: We used to make a good many seamless bags. In an order this week the Government is asking for a great number of bags. I wonder if any mill has gone back to weaving seamless bags. They are made on the same principle as in making pillow tubing. We are going to have to go back to making bags and might as well make the seamless ones.

Chairman Lockman: Is anyone making seamless bags now?

Mr. Jones: I believe that with the high-speed sewing machines we have now it would be cheaper to sew up the bags than to make them seamless, because you have to put in two picks instead of one and do not use the full width of the loom.

Chairman Lockman: In other words, you could run wide cloth as quickly on your looms.

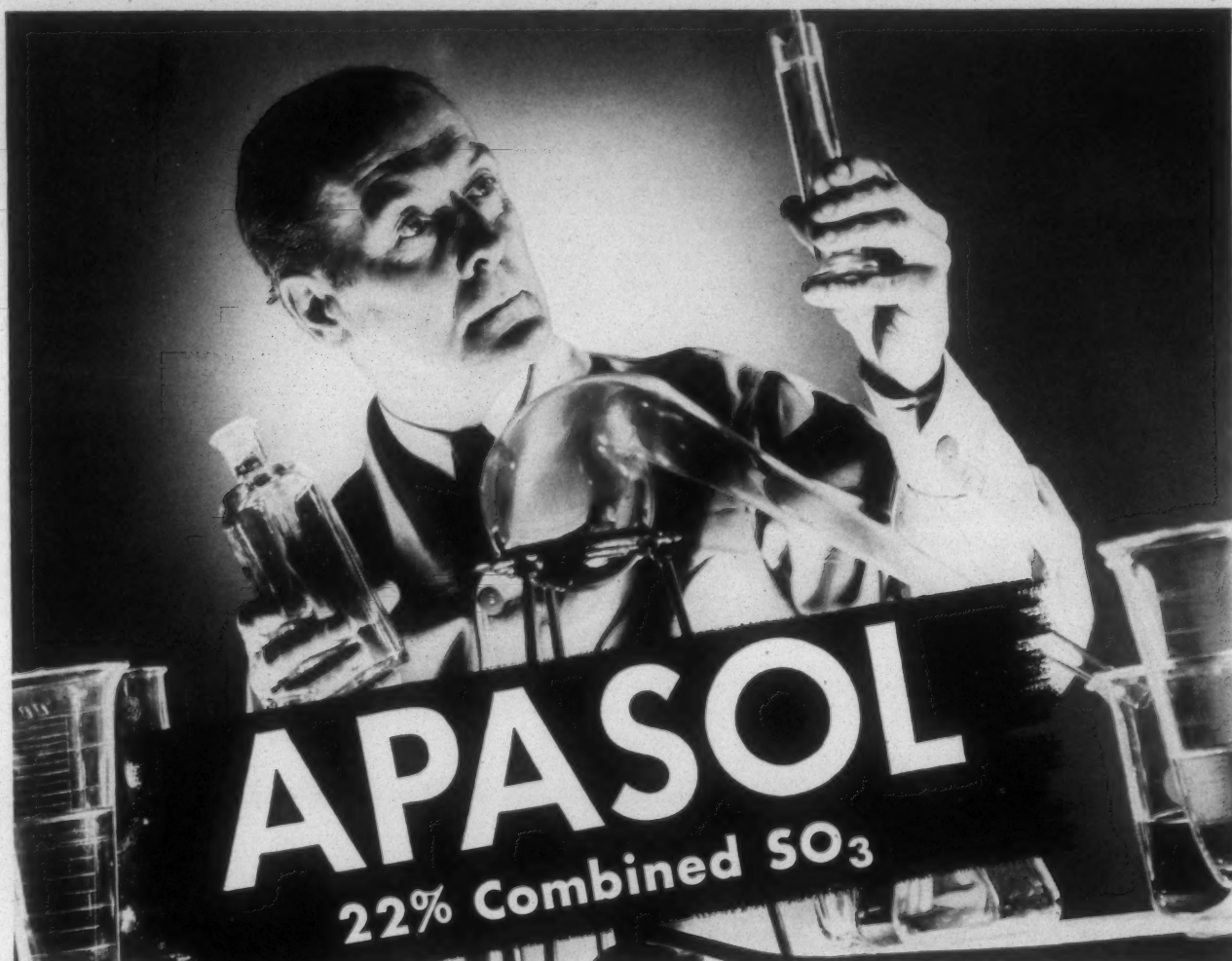
Mr. Clark: How about running a double selvage—weaving two seamless bags at the same time and then splitting them?

Mr. Jones: I don't know. That is beyond me.

Mr. Clark: I know we used to make a great many seamless bags.

(Continued on Page 43)

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Mill News

MOUNT HOLLY, N. C.—Five new Saco-Lowell combers have recently been installed at the plant of Superior Yarn Mills here, to replace 11 of the older type combers.

ASHEVILLE, N. C.—American Enka Corp. has under construction a second extension to the twister building, steel and reinforced concrete, one-story, 82x200 feet, built-up brick roof.

CLOVER, S. C.—Clover Spinning Mills, Inc., have recently installed 24 H & B cards, 24 deliveries of H & B drawing, and high draft roving throughout the card room.

DANVILLE, VA.—At the Riverside & Dan River Cotton Mills, all plants have completed the installation of Saco-Lowell Blending Reserves and modernization of the opening and picking departments.

LAURINBURG, N. C.—Waverly Mills, Inc., manufacturers of single and ply yarns, have recently installed H & B high draft roving throughout the card rooms in both plants.

UNION, S. C.—The Unity Knitting Co. has been acquired by Joseph A. Conrad, and is now being renovated so as to start operations on June 1st. It will employ about 30 to 40 operatives, and Mr. Conrad has been able to secure material from the Government to operate in full capacity for many months to come. Mr. Conrad comes to Union from Charlotte, N. C.

DANVILLE, VA.—Workers in the Dan River Cotton Mills here have received a circular letter from George S. Harris, mill president, commending them for their response to the recent blackout.

The letter points out that the half hour's stoppage caused the mill a loss of 50,000 yards of production and that it would be impossible to participate in all future trials unless this is made mandatory by State defense officials.

CHATTANOOGA, TENN.—The approximately 1,600 employees of the Dixie Mercerizing Co. have signed up 100% to invest 10% or more of their earnings in War Bonds, according to W. Neil Thomas, superintendent of the Lupton City spinning plant. The Lupton City plant employs about 1,200, while another 400 work at the Ridgedale plant.

BREWTON, ALA.—At the Bonita Ribbon Mills, manufacturers of silk ribbons, work has been completed recently on installation of new looms and auxiliary equip-

ment that will approximately double the capacity of the plant.

FAYETTEVILLE, N. C.—Lakedale Mills has recently installed new opening and picking equipment, 30 new cards, considerable drawing, and long draft roving. All equipment by Saco-Lowell.

JOHNSON CITY, TENN.—The 630-odd employees of Gloria Rayon Corp. here, a division of Burlington Mills, have subscribed 100% to buy War Bonds and Stamps, according to E. R. Baylor, permanent county chairman for War Bonds and Stamps.

MOUNT HOLLY, N. C.—At the Woodlawn plant of American Yarn & Processing Co., 7 new Saco-Lowell combers have recently been added, to replace 13 older type combers.

LAURINBURG, N. C.—Bagpipe Mills, Inc., have recently been incorporated to operate on cotton yarn production here. Reports are that the mills have taken over a one-story building for remodeling, in which to operate.

SMITHFIELD, N. C.—At the Smithfield Mfg. Co., a subsidiary of Burlington Mills Corp., new equipment has been installed throughout the mill with the exception of the cards. All the equipment was manufactured by Saco-Lowell Shops.

BRISTOL, TENN.—It is reported that the Bristol Weaving Co., a subsidiary of Burlington Mills Corp., Greensboro, N. C., plans a one-story addition for expansion of the weaving department. The company weaves rayon piece goods.

STATESVILLE, N. C.—Abernathy Yarn Mills, formerly Abernathy-Houser Mfg. Co., have recently installed 24 new H & B cards, 36 deliveries of H & B new drawing, and H & B. high draft roving throughout the roving processes. This is a yarn mill, listed as making 38s to 60s combed yarns, ball warps, skeins and cones.

LANETT, ALA.—The West Point Mfg. Co. will donate \$150,000 to a hospital which Chambers County proposes to build, equip and maintain at approximately \$300,000, on land donated by it, the hospital to be located in the Chattahoochee Valley to serve the public generally. The population of the five valley towns, in each of which the West Point Mfg. Co. has a textile mill, is approximately 30,000. About 24,000 consists of employees of the company and their families.

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Personal News

W. M. Allison has been promoted from overseer of carding to superintendent of Startex Mills, Tucapau, S. C.

T. C. Drew has been transferred from Startex Mills, Tucapau, S. C., to the superintendency of the Gaffney Mfg. Co., Gaffney, S. C.

W. H. Thompson has been promoted from section man to foreman of spinning, winding and twisting, third shift, at Virginia Mills, Inc., Swepsonville, N. C.

W. W. Phillips has accepted a position as second shift foreman of spinning, winding and twisting at Virginia Mills, Inc., Swepsonville, N. C.

E. K. Willis, president of the Willis Hosiery Mills, Concord, N. C., has been appointed to direct the second USO financial campaign in Cabarrus County.

Rhoten Shetley, former Furman University and Brooklyn professional football star, has been appointed athletic director at Dunean Mills, Greenville, S. C.

John A. O'Neal will become head of the cotton department of the Riverside & Dan River Cotton Mills, Danville, Va., on July 1st, it is reported. Mr. O'Neal has been previously with the Avondale Mills of Alabama, Exposition Cotton Mills of Atlanta, and Springs Cotton Mills, of South Carolina.

Daniel J. Stowe, textile executive of Belmont, N. C., has been sworn in as an ensign DV-(S), in the Naval Reserve, at the Charlotte Naval Reserve Officer Procurement Headquarters.

Textile Dinner Sponsored By Charlotte Alumni Chapter of Phi Psi June 12th, Charlotte

The Charlotte Chapter of Phi Psi, national honorary textile fraternity, will sponsor a textile dinner on the evening of June 12th, 8 o'clock, at the Charlotte Hotel. This is on the eve of the annual meeting of the Southern Textile Association, and active and associate members of the Association and their guests are invited to attend.

Present plans, while not finally completed, indicate that there will be a high army official as speaker, to speak on war, according to J. V. Kilheffer, president of the local chapter of Phi Psi.

Further announcements concerning this dinner will be released to the press as soon as plans are completed.

It will be noted that due to war conditions, the annual banquet of the Associate Members' Division of the Southern Textile Association has been cancelled, as well as has the annual Friday night banquet of active members. The S. T. A. meeting will consist of a morning session Saturday, June 13th, and a luncheon.

R. W. Carr has been transferred from the position of superintendent of the Gaffney (S. C.) Mfg. Co. to that of cost manager of all the Montgomery chain of mills. His headquarters will be at Spartan Mills, Spartanburg, S. C.

M. D. Vaughn, for the past two years office manager of the Reidsville (N. C.) Throwing Co., has been transferred to Asheboro, N. C., as office manager of the Cetwick Silk Mills, a subsidiary of the Burlington Mills Corp.

Henry Roediger has resigned as vice-president and head of the cotton department of the Riverside & Dan River Cotton Mills Co., Danville, Va.

Everett M. Cushman, superintendent of the China Grove Cotton Mills, has been elected a director of the Rotary Club of China Grove, N. C.

Mill Superintendents Has Athletic Sons



B. M. Bowen, superintendent of the Salisbury Cotton Mills, Salisbury, N. C., is justly proud of his three boys. The twins, Harold and Carrol, after starring at football at Salisbury High School, are now repeating the performance at Catawba College, Salisbury, Harold at back, Carrol at left end. Merle, shown in football togs at right, is a mainstay on the Mars Hill College team, near Asheville, N. C.

Harold, height 5 feet 10½ inches, recently won the high jumping event in a track meet with a jump of 6 feet. Both the twins play baseball and basketball, as well as football.

James Truslow Commissioned Naval Lieutenant Commander

James L. Truslow, Northern agent of the Whitin Machine Works, Whitinsville, Mass., has received a commission as lieutenant commander in the Naval Reserve Force for the duration of the war. He will be stationed in Washington and will assist the Navy Supply Corps in its contacts with the textile mills.

Commander Truslow has been connected with the

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Whitin Machine Works since 1923. His work has been mainly on machine development and mill advisory problems. He is the holder of a number of patents and played a considerable part in the introduction of long draft spinning and long draft, interdraft and superdraft roving in this country. Until 1939, it was part of his duties to make frequent idea-scouting trips abroad. Among the constructions which he brought back are bi-coil drawing and the Whitin-Schweiter Automatic Filling Winder.

E. J. Barth Joins National Oil Products Co.

E. J. Barth, petroleum technologist, of Three Rivers, Tex., has just joined the Research and Development staff of National Oil Products Co., Harrison, N. J., it was announced by G. Daniel Davis, vice-president in charge of Market Research and Product Development.

Wm. C. Vereen, II, Made Vice-President Of Moultrie Mills

Atlanta, Ga.—William C. Vereen, II, has been named vice-president of Moultrie Cotton Mills, the position vacated by his father, William J. Vereen, who rose to presidency succeeding his father, William Coachman Vereen, founder, who died in his 83rd year. William C. Vereen, II, has been with the firm for about seven years.

N.A.C.M. Medal Won By A. N. Kaplan At Georgia Textile School

Atlanta, Ga.—A. N. Kaplan, a senior in textile engineering in the A. French Textile School of the Georgia School of Technology, was awarded the medal offered by the National Association of Cotton Manufacturers at the commencement exercises of the school. The medal is awarded each year to the student having the highest scholastic record.

C. A. Cobb received the medal offered by the Cotton Manufacturers' Association of Georgia for the senior in textile engineering with a high scholastic standing who shows the greatest interest and ability in textile engineering.

Dr. M. L. Brittain, president, Georgia School of Technology, was the principal speaker at the exercises, at which 19 students were graduated, with each receiving a degree of B.S. in textile engineering.

S. C. Mill Men Re-elect Chapman

The South Carolina Cotton Manufacturers' Association, in annual session at Spartanburg, pledged full cooperation to the Nation's war effort and agreed to make any changes necessary to meet war requirements. The Association re-elected President James A. Chapman and all officers and directors.

Discussion during the half-day session, the program being curtailed because of the rubber and gasoline shortage, centered around changes that have been made as a result of war production. Around 70 textile executives of this State and visitors from other sections of the Piedmont attended.

The Association authorized the continuance of the five-acre cotton contest which is conducted through the Clemson College extension service to stimulate higher yields of longer staple cotton by South Carolina farmers. The mill executives have appropriated \$2,000 annually for a number of years for this contest as prize money.

In re-electing Mr. Chapman, president of the Inman and Riverdale Mills of Spartanburg County, the Association adopted a resolution "expressing our deep appreciation for his unselfish and untiring services, for his leadership and express our thanks for the great contribution which he had made to our industry since he has been president of our Association and so long as he is active in the affairs of our Association, to pledge him our wholehearted co-operation." Mr. Chapman has headed the Association for the past two years.

Other officers were named as follows: William P. Jacobs, of Clinton, executive vice-president and treasurer; S. H. Swint, of Graniteville, second vice-president; Miss A. L. Norman, of Clinton, acting secretary; T. Frank Watkins, of Anderson, general counsel. Directors follow: H. K. Hallett, of Paw Creek, N. C.; E. R. Stall, of Greenville; C. B. Hayes, of Lyman; M. L. Cates, of Spartanburg; B. F. Hagood, of Easley; Charles B. Nichols, of Anderson; B. B. Gossett, of Charlotte, N. C.; J. B. Harris, of Greenwood, and George M. Wright, of Great Falls.

Visitors at the session included: Herman Cone, of Greensboro, N. C., president of the American Cotton Manufacturers' Association; W. M. McLaurine, of Charlotte, N. C., secretary-treasurer of the American Cotton Manufacturers' Association; H. H. Willis, Dean of the Clemson College Textile School, and John Wiggington, of the Clemson Textile Foundation.

Dean Willis addressed the manufacturers on the formation of a special textile foundation to promote research, scholarships and service in textile training for young men.

On motion of John A. Law, of Spartanburg, chairman of the Resolutions Committee, the Association adopted a resolution of regret at the death of Ben D. Riegel, of Ware Shoals, South Carolina's only executive to die during the year.)

The Association also dispatched a telegram of good wishes to Capt. Ellison A. Smyth, of Flat Rock, N. C., long active in the Association's work and founder of a number of South Carolina's mills, who is now 93 years of age and was prevented from attending the annual meeting here because of his age.

Resolutions thanking the Spartanburg Country Club for use of their facilities for the meeting and L. C. Dodge

COMING TEXTILE EVENTS

JUNE 6

American Association of Textile Chemists and Colorists, Southeastern Section, Meeting, Atlanta, Ga.

JUNE 12

Textile Dinner, 8 P. M., sponsored by Charlotte Alumni Chapter of Phi Psi. S.T.A. Members and Guests invited.

JUNE 13

Southern Textile Association, Annual Convention, Charlotte, N. C., Charlotte Hotel.

JUNE 30

Piedmont Section, A. A. T. C. C., Dinner Meeting, Charlotte Hotel, Charlotte, N. C. (Normally held as Summer Outing, Myrtle Beach, S. C.)

for his work in auditing the Association's books were also adopted.

Reports of the legislation, taxation, public relations, traffic, insurance, membership and other committees were heard during the session.

Pickard Named Treasurer Of Research Institute; Blanchard On Full Time

The election of Edward T. Pickard as treasurer, and of Fessenden S. Blanchard as executive secretary in addition to president, was announced by the Textile Research Institute, Inc., following a directors' meeting just held at the Hotel Roosevelt, New York.

The new arrangement followed the request of Mr. Pickard, who has found it necessary, because of continued ill-health, to devote only a part of his time to active business. However, his continuance as executive secretary of the Textile Foundation, plus his association with the Institute as treasurer and member of the executive committee, insures the maintenance of his close identification with, and interest in, the whole textile research movement. It also insures the continuation of the close working arrangement between the Institute and the Foundation.

Mr. Blanchard will give his full time to his work with the Institute as president and executive secretary. He is tendering his resignation to the War Production Board, and will take up his duties at the headquarters of the Institute, 10 East 40th Street, New York, on July 1st.

In view of the decision of the Institute and of the Foundation to adapt their research work to the war program which resulted in the organization of the Textile Research War Council, Mr. Blanchard's consent to serve in a full time capacity with the Institute comes at a particularly fortunate time. Blanchard's intimate association with all branches of the textile work of the War Production Board over the past six months, together with the contacts established with individuals in the Government and in industry, will enable him to continue his important work with the war program.

Harold DeWitt Smith, who has been treasurer of the Institute, was elected a vice-president. Fuller E. Callaway, Jr., and Dr. Robert E. Rose are also vice-presidents. These officers, with the following chairmen of the standing committees, comprise the executive committee: W. D. Appel, Stanley B. Hunt and Douglas G. Woolf.

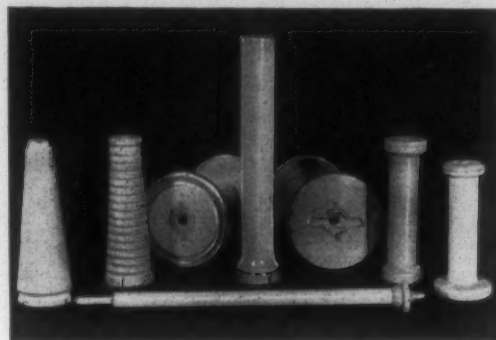
OBITUARY

L. W. GREEN, SR.

Charlotte, N. C.—L. W. Green, Sr., 75, died at his home here recently.

Mr. Green was prominent in the dyestuff industry and was affiliated with the DuPont Co. for 23 years. A native of Georgia, he was born Nov. 13, 1866. He had lived in Charlotte since 1895. He was one of the oldest members of St. Martin's Episcopal Church, a Shriner, and was very active in church and civic affairs.

He is survived by his wife, Mrs. Katherine Stuart Barr Green; a daughter, Mrs. John McKee, of Chester, S. C.; a son, Lewis E. Green, Jr., of Philadelphia, Pa.; five grand-children, and one great-grandchild.



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TUBES

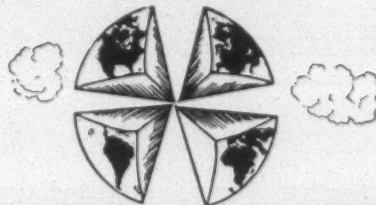
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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

In Production

Those who have had experience in starting a new cotton mill know that it involves many headaches.

It is usually anticipated that with the fine and new machinery, all that is necessary is to start the cotton through the lappers and in a short time high quality goods will be coming off the looms, but that is not the way it works.

At every step adjustments have to be made and it is usually disclosed that employees who have not previously worked together find it difficult to adjust themselves to each other and to adapt themselves to machines and rules which are different from those to which they have been accustomed.

It is found that many of the employees, and some of the overseers and second hands, who came with excellent recommendations, are either inefficient, careless or lazy, but it takes time to discover their incompetence and to replace them with competent men.

While all of this is going on, the president or the manager who has, personally, estimated that a full production of first-class goods would come from the looms upon a certain and too early date, and has sold the goods for a specified delivery, is tearing his hair and threatening to fire everybody, because he is only shipping about one-fourth of the goods promised and his customers are writing that about half of the yardage received is too light or too narrow or has defects.

Every person in authority is looking for some

one upon whom to place the blame and there is turmoil and dissensions.

Then one day the situation seems to have leveled off overnight. The spinning begins to run good, the sizing upon the warps seems to be just right, every loom on each alley seems to be running full speed and the cloth room has to run overtime to finish and bale the goods.

It has been exactly the same with our production of war goods, only worse, because we had to change plants from automobiles to planes and tanks and from textile machinery to guns and we had to put new plants into production even while they were under construction.

Men, absolutely new to each other and with no experience in the manufacture of the machines they were called upon to produce, were thrown together and in those groups were some who were absolutely incompetent and some whose only objective was to get a job which would pay them a salary or one which would keep them out of the army.

To make matters worse, the labor racketeers saw an opportunity to financially benefit themselves and did not hesitate to promote discord and strikes among those engaged in the production of war materials.

It has, indeed, been a madhouse but now, just as was the case with the new cotton mill illustrated above, the situation has leveled off and we are really "in production."

We are not only "in production" but are producing better planes and tanks, and other war materials, than any other country. Not only are we doing that but the inventive genius of America is at work and almost daily our engineers, and, even the men operating machines in the plants, are making improvements in war equipment or in methods of producing them.

On February 28th, Donald M. Nelson wrote to the Production Drive Committees in War Production plants:

"The President's production quotas must be met. They must be *topped*. This official Plan Book presents a straightforward production plan. . . . Start putting it to work. Your country is counting on you."

Our country has not depended upon the war materials production plants in vain, for those plants, almost without exception, are rolling in high gear now and there is a steady stream of war equipment which a short time ago was badly needed.

The United States, England and Russia are now producing three times as much war materials as Germany, Italy and Japan.

Our production is upon the upgrade while that of Germany is being seriously curtailed by the wrecking of production plants by the R. A. F. Those flyers are now being joined by American

bombers and we know that almost every manufacturing establishment in Germany will, before long, be a target for high explosive bombs.

There is still the shipping problem and the difficulty of delivering war materials to our allies and to our steadily increasing forces abroad, but we are "in production" now and there can be a cessation of charges and recriminations. There must be no let up in our production efforts but we need not worry so much.

The war is going to won by an overwhelming volume of planes, tanks and guns manned by millions of well trained American boys.

Every Axis tank must face three better equipped and better armored tanks manned by the Allies. Every German plane must have to fight five faster planes each with more and better guns.

Production will win the war.

Should Co-operate With Suppliers

We understand that some textile mills are not co-operating very fully with their suppliers, the manufacturers of textile machinery and supplies.

Many mills holding Government contracts find themselves forced to call upon their suppliers for quick deliveries of steel, solder and various other items and then take little interest in extending their priority rating to such suppliers.

The suppliers, having taken such goods from their stocks, cannot replace them without extensions of the priority orders of the mills and yet, very often, find the mills indifferent to their requests for the extensions.

Upon the basis of "Do unto others as ye would have them do unto you," textile mills should not delay in taking the necessary steps to extend their priority ratings to those from whom they have secured materials.

This is a day when co-operation should be given first consideration.

Rigid Ceiling for Textiles

Price Administrator Leon Henderson has substituted a rigid ceiling for the flexible ceiling which has prevailed for some time but it is, at best, an experiment and may do more harm than good.

As no ceiling had been placed on raw cotton or on labor, it was reasonable to allow a flexible ceiling which would go up or down with the advance or decline of those commodities and thereby permit a stabilized manufacturing margin.

The removal of the flexible ceiling on textile products was apparently a step taken to put a ceiling on raw cotton through the instrumental-

ity of the cotton manufacturer. With a flat ceiling on the price of cotton goods, and no limit on the price of cotton or labor, the manufacturer would definitely be limited in the price which he could afford to pay for raw cotton or labor. If and when the price of cotton reaches the point where the mill will lose money the manufacturer will be forced to stop buying and as a result the price of cotton goes down.

One danger of this method will be to place upon cotton manufacturers blame for depressing the price of cotton and thereby incurring the ill will of the farmers.

For years the cotton manufacturers have been trying sincerely to convince the cotton farmers that the mills are their friends and it would be most unfortunate if Leon Henderson uses a plan which will indirectly reduce the price paid for cotton and, at the same time, makes the cotton mills the goats.

Out of the Rumor "Grab Bag"

Some say there will be too much cotton bagging material, some say there will be too little. We don't know. We only know there are definitely rumors. To substantiate our claim, we quote from two communications coming to our desk at about the same time. The first is to spike the rumor that there will be too much bagging material, as follows:

The entire production of bag osnaburg and bag sheeting provided for in the recent WPB textile conversion order (L-99) will be needed to meet minimum military and agricultural demands, T. M. Bancroft, chief of the Carded Cotton Fabrics unit of the War Production Board, said May 25th.

Mr. Bancroft made his statement because of recent reports in some quarters that an over-production of osnaburg would result from the conversion order.

Mr. Bancroft said that some months ago the Defense Supplies Corp. was authorized to purchase large yardages of bag osnaburg and bag sheetings for stockpile, but because of the great need of bags for agricultural products and the limited supply, only a very small yardage was purchased.

The situation has not changed. The Defense Supplies Corp. still stands ready to make such purchases, but no offers have been received.

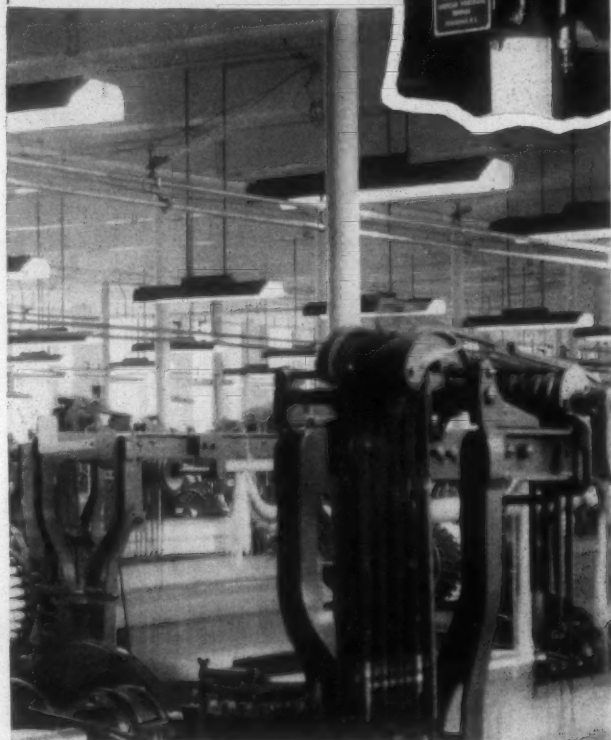
And now here's the other side of the rumor:

Branding as false the recurring rumors of shortages in cotton fabrics for bag purposes, Wm. Rhea Blake, executive vice-president of the National Cotton Council, this week said that War Production Board orders give definite assurance of an ample supply of cotton bags for the packaging of agricultural and food products.

"The loose talk that has led bag users to conclude that they cannot hope to obtain cotton bags and must therefore use some other type less suitable for their purpose is entirely without foundation," Mr. Blake said. "The facts are that the Government, recognizing the need for bag fabrics, some time ago took steps to insure a sufficient supply of cotton bag goods. This supply will be adequate to meet even the increased demand."

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MASTER MECHANICS' SECTION

How to Select, Install & Maintain Control Equipment

By E. H. ALEXANDER
Engineer, Industrial Control Division
General Electric Company

ANY equipment in daily use, and upon which industry depends for continuity of service, requires periodic inspection and maintenance. This is especially important when plants are running at peak capacity and when top production depends upon the continuous operation of each and every piece of equipment.

Electric control is no exception to this rule. After operating sometimes thousands of times a day, it is vitally important that controls be inspected regularly and that replacements or repairs be made quickly when necessary. Such inspection and maintenance pays big dividends by helping to keep up continuous production and by preventing costly shutdowns that waste the time of men and machines.

As in all operating equipment, prerequisites to any good maintenance program are the proper selection and installation of the equipment.

Selection

The selection of electric control for a given application depends mainly upon the factors of available power, surrounding conditions, and starting conditions.

The points to be considered regarding available power are: whether alternating-current or direct-current power is used; if a-c, the number of phases; the voltage; the frequency; and whether a two-, three-, or four-wire system is to be used.

Complete information on any unusual service conditions should be sent to the manufacturer before selecting control equipment. The following is quoted from the NEMA Industrial Control Standards:

- a. The use of apparatus in cooling mediums having temperature higher than 40 C. or at altitudes greater than 6,000 feet should be considered as special applications.
- b. There are further conditions which, where they exist, should be called to the manufacturer's attention. Apparatus for use in such cases may require special construction or protection. Among such unusual conditions are:

1. Exposure to damaging fumes.
2. Operation in damp places.
3. Exposure to excessive dust.
4. Exposure to gritty or abrasive dust.
5. Exposure to steam.
6. Exposure to excessive oil vapor.
7. Exposure to salt air.
8. Exposure to vibration, shocks, and tilting.
9. Exposure to explosive dust or gases.
10. Exposure to the weather or dripping water.

If control equipment is to be used under any of the above conditions, apply to the manufacturer for recommendations.

Installation

After the proper control has been selected for the job, the next important step is to install it correctly and make necessary adjustments before putting it into service.

Unpack the equipment carefully as small parts may be thrown away with the packing material. Mount the panel vertically, so that the contactors will open by gravity when power is cut off. Panels should be mounted on a flat surface, and care should be taken not to twist the back when mounting. Copper grounding terminals are provided on open controllers for connecting ground wires to the apparatus. The conduit connection to the cases of enclosed controllers is considered sufficient grounding protection.

The sealing surface of the magnet frame and armature is spread with grease or oil to prevent rusting in shipment. The grease or oil should be removed when the contactor is put into service, but the surface should be wiped occasionally with a thin, rust-resisting oil. Before power is applied, each contactor and relay should be operated by hand to see that the moving parts operate freely and without binding. All electric interlocks should be clean and should make good contact when closed.

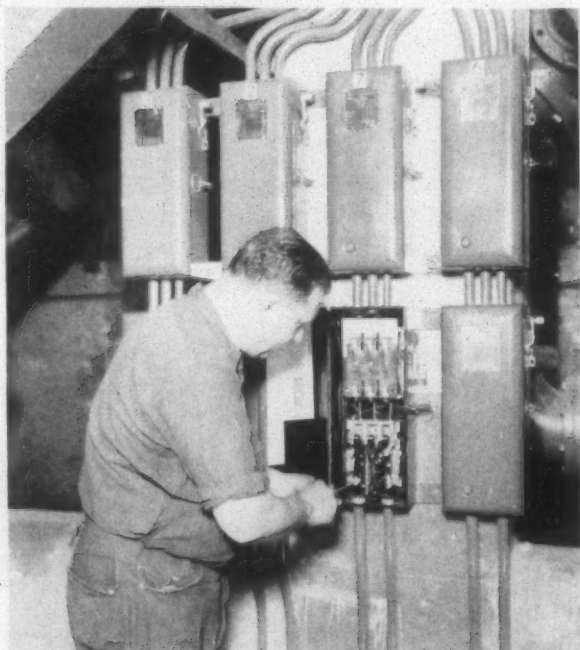
Resistor boxes should always be mounted with the grids in a vertical plane, and should be so located that free ventilation is permitted. To keep heating at a mini-

mum, it is recommended that six-inch spacers be used between boxes when stacked, and that the stacks be 12 inches apart. Such an arrangement is desirable when continuous or heavy intermittent duty is expected, and essential when boxes are stacked over six high. Slow-burning or non-inflammable wire should be used in connecting to resistor terminals, to withstand the heat from the resistor.

ADJUSTMENTS

Contactors are designed to operate properly if the line voltage is within 85 to 110 per cent of the panel nameplate rating for a-c circuits, and within 80 to 110 per cent for d-c circuits. Wider ranges require special devices.

Where there is a continuous 10 per cent increase in voltage, suitable coils should be ordered, because, with this increase in voltage there is an approximate 50 per



Panels should be mounted vertically, so that the contactors will open by gravity when power is cut off. They should also be mounted on a flat surface and in a clean, dry spot if possible.

cent increase in wattage, which greatly increases the heating of the coil. While this will not cause immediate failure of the coil, the deterioration of the insulation is more rapid and the ultimate life of the coil is shortened. There is also an increase of 20 per cent in the pounding effect, resulting in a more rapid deformation of the armature, crystallization of the magnet parts, breaking of the contact tips, and increased noise.

The armatures should seal when the proper voltage is applied to the coils and should open by gravity when the power is cut off. All contact tips should, when closed, make line contact near the bottom of the face. On opening, the final break will be near the top. The rolling and wiping motions when closing and opening keep the contacts in good condition.

Electrical interlocks are adjusted at the factory to make contact at approximately the same time that the main contactor tips touch, or even a trifle later. For some special applications the interlocks may make contact be-

fore the main tips touch but, in general, the above instructions apply. To change the adjustment, loosen the nuts on the front and back of the base and screw the stud in or out to suit the conditions.

Mechanical interlocks are so adjusted that, with one contactor in the sealed (closed) position, there is a very small play on the other contactor. This play must not allow the moving contacts of the second contactor to touch the corresponding stationary tips when the tips of the first contactor are just touching.

General Preventive Maintenance

Now that the control device has been properly selected, installed, and adjusted, the maintenance program itself starts.

A first consideration in keeping control equipment in proper working condition is to prevent an accumulation of dirt, oil, grease or water on the operating parts of the control. It is, therefore, advisable to carry in stock protective paints for the stationary iron parts, and insulating varnish of the proper characteristics for the coils.

Where the air is saturated with moisture, or subject to the action of corrosive gases, it is well to inspect and paint the various control parts from two to four times a year, depending on the severity of the operating conditions.

It is often desirable to add heaters or lamps within the controller enclosure to prevent condensation of excessive moisture. For best results, such heaters should be energized continuously, especially when the controller is not being used.

Circuit breakers or contactors are usually of very rugged construction. Still, it is best to operate them by hand from time to time and check to make sure that all of the clearances are normal and that parts are working freely. Should parts become worn so that adjustments cannot be maintained, new parts should be used. Adjustment and cleaning, as well as renewal of the tips, is necessary and depends on the frequency of operation of each device. In the case of contactors, for example, the armature should be cleaned and checked for free working and the condition of the magnet contact surfaces.

Occasional inspection should be made of all nuts and connection wires on panels and resistors, particularly when subject to vibration. Close inspection of pigtail connections should be made periodically since these are of finely woven wire for flexibility. In extremely corrosive atmospheres pigtail connections have been known to fall apart before there was any apparent indication of failure.

Float switches should be given the best of care, especially if they are of the moving contact type. The tips should be adjusted and lined up properly and, of course, cleaned if any indication of excessive corrosion is noted. The bearings should be made free to operate and any tendency towards binding should be corrected immediately.

In float switches of the mercury contact type, the mercury tubes should be held tightly in place, and if inspection shows that the tubes are becoming dark, it may be an indication of air leakage and the tubes should be renewed.

Trouble Shooting

Troubles are bound to occur in the best of control equipment. Knowing what to do about them when they

do occur will save much precious production time. The remainder of this article will discuss some of the more common types of trouble which the maintenance force encounters with control devices, show the causes of such troubles, and explain how to stay one jump ahead of them. If the fundamental cause of each trouble is understood the remedy will quite likely be apparent, and ways will be found to lessen the resultant trouble.

CONTACTORS

A contactor has several bolted or spring-closed contacts. Excessively high resistance at these contacts is the cause of the very high temperatures, such as 100 to 200 C., that may be reached when the contactor is carry-



Replacing a movable contact on a 2300-volt motor control. Renewal parts should be kept handy at all times so that replacements can be made quickly.

ing rated current or less. The most likely point of high resistance is at the contact where the movable tip makes contact with the stationary tips.

However, high resistance may occur at any of the several bolted joints on the contactor. Therefore, if one of these devices begins to develop an excessive temperature, a millivoltmeter should be used to determine which of the several joints has a high-voltage drop across it. An a-c millivoltmeter is now available that can be used for checking the voltage drop on a-c contactors.

When the copper contact or contacts that have excessive drop across them have been located, correction can be made by opening the contact and removing the oxide with a file (not with sandpaper or carborundum paper). It is unusual to find a high resistance in a bolted joint unless the contactor has previously reached very excessive temperatures. However, when excessive resistances are found in joints the cause should be removed.

Since high resistance will most commonly be found in the active contact, it is a very simple matter to inspect these tips weekly or monthly. If the temperature is unduly high, the tips should be given a few strokes with a file.

The foregoing comments apply particularly to copper contacts because they oxidize readily, and the copper oxide formed has a very high resistance. A file will remove the oxide and reduce the resistance to a low value again. Depending on various conditions, it may take a short or long time for the formation of sufficient oxide to cause excessive heating under ordinary types of service.

However, if sulphur gas is present, a high-resistance film will develop quite rapidly. To prevent this action, the contactor should be mounted in a tightly gasketed enclosing case, or immersed in oil.

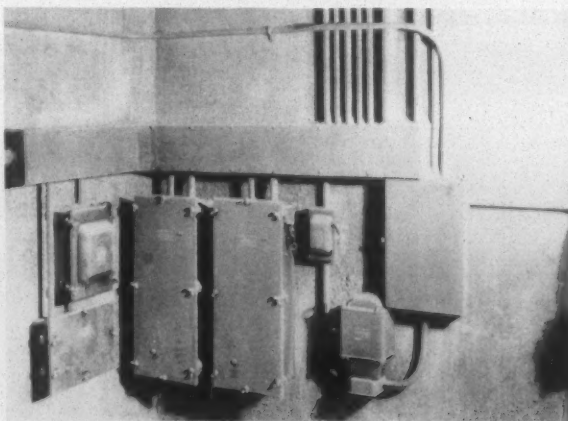
Sometimes it is not practicable to keep the resistance of contacts low by filing them. When it is desired or necessary to maintain a low resistance of the active contact without servicing, a silver face can be brazed to the two tips so that the contact is made through that metal. Silver will oxidize and the oxide has a higher resistance than the pure metal, but when heated, silver oxide has the unusual property of reverting back to the metallic form. Therefore, silver contacts are self-purifying.

Electrical interlocks may fail to make circuit because of oxidation where copper contacts are used. Sometimes such failure occurs because dirt gets between the contacts. By using one hemispherical and one flat tip made of silver, both of these troubles will be overcome. The point of the hemispherical tip will make contact without trapping dirt particles between it and the flat tip, and the use of silver will overcome the oxide trouble occasioned by oxidation when copper contacts are used.

FOR SEVERE SERVICE

Excessive wear on the contact tips of a contactor indicates that it is operated frequently. For conditions of this kind, silver should not be used for the contacts, because it does not have the ability to stand up under this severe service as well as copper.

If the service is unusually heavy, and if the root-mean-



The surrounding atmosphere determines to a great extent the proper type of enclosure to be used. These starters are installed in an extremely dusty location, and are protected against dust by special dust-tight enclosures.

square of the current is not more than equivalent to three-fourths of the contactor's rating, the tip can be faced with a certain alloy that will last several times longer than copper tips. The cost of this material is quite high, but its use is sometimes warranted.

LET CONTACT TIPS STAY ROUGH

Some maintenance men have the erroneous impression that contact tips that have been roughened by service

should be kept smoothed up so that they will carry the load. A roughened tip will carry current just as well as a smooth tip.

Of course if a large projection should appear on a tip because of unusual arcing it should be removed. However, a tip that has been roughened by ordinary arcing need not be serviced. If a copper tip becomes overheated, this condition indicates that oxide has developed and should be removed.

A large percentage of contactor coil troubles can be traced back to heating. Therefore, if the temperature can be reduced coil troubles can be greatly decreased. Since the heating of a d-c coil will vary as the square of the voltage, and the heating of an a-c coil will vary about as the cube of the voltage, it follows that coils should be wound for the voltage that exists on the line. If the ambient temperature is high, this precaution is all the more important.

PREVENTING COIL BURNOUTS

When an a-c magnet, such as a solenoid, is supplied with constant-voltage excitation it requires a large inrush of current to close the armature. When the armature closes the coil current drops to a normal value. Sometimes armatures may not close because of excess friction or for some other reason and the large inrush current may burn out the coil within a few seconds.

Such mishaps can be prevented by the use of a thermal cutout to protect the coils. When the thermal cutout opens because the armature fails to close, it is merely necessary to replace a small link made of two pieces of metal held together by a low-melting-point solder.

RESISTORS

Resistors are important auxiliaries and are encountered in many types, such as porcelain-tube, enameled resistors, open-wound, wire resistors, strip-wound, cast-grid, etc. Some types are more likely to develop certain kinds of trouble than others.

Cast grids are usually assembled and held together by being clamped on a tie rod. The current passes from one grid unit to another across a ground face. When too much current, say, several hundred amperes, is made to flow across these ground surfaces, they may develop high resistance and destroy the joint.

To overcome this difficulty, these joints should be cleaned and the current path paralleled. This procedure will reduce the current in the middle joints, where the trouble usually occurs or is most likely to develop.

Edge-wound or strip resistors usually have their terminals either brazed or welded to the strip, which prevents excess resistance from developing at this joint. In order

to provide an adjustable contact on this type of resistor, a clamp type of terminal is sometimes furnished. However, since the resistor may become quite hot at this point, a bad contact is very likely to develop. Therefore, if one does develop, the best cure is to braze the terminal at the proper position.

The high-resistance cast grids that have a small cross-sectional area sometimes give trouble because of breaking, especially if they are mounted on machines that vibrate severely. The best correction for this trouble is to use an edge-wound resistor, which is non-breakable. This type is made of corrosion-resisting material that is capable of withstanding very high temperatures without scaling.

RELAYS

The function and importance of relays is too well known to need discussion here. To cover all the relays used would be an endless task because there are many varieties of them. A number of relays have been designed to operate as a function of time. The one that was designed first to operate on a time basis was the dashpot type. Movement of a solenoid is retarded by means of a dashpot, giving a time-current relation that is called an inverse-time characteristic.

The kind of trouble that is inherent in a dashpot was the primary reason for the development of the other types of timing relays. A dashpot is essentially a close-fitting device that is easily affected by dirt, gumming of the oil, and corrosion of the close-fitting parts. Also the torque of the magnets varies with the position of the solenoid armature in its coil.

If trouble is experienced due to tripping while starting a motor or shortly after getting up to speed, there are three things that can be done:

1. A heavier oil may be used if the relay almost holds.
2. A starting contactor can be used that does not include the overload relay in the circuit. After the motor is up to speed, the running contactor can close and the starting contactor can open, connecting the overload relay into the circuit. This is a rather complicated method, but it is sometimes used.
3. The final alternative is to replace the dashpot with a temperature type of overload relay. This is one of the reasons why the temperature-type overload relays were originally developed.

TEMPERATURE OVERLOAD RELAY

Since the function of a temperature overload relay is to protect a motor under all ambient temperatures, its final temperature should be the same as that of the motor—which is 90 C. This means that a motor can have a 50 C. rise in a 40 C. ambient.

Therefore, the relay should just trip if placed in a 90 C. ambient, or in a pail of water held at that temperature. If a relay does not function correctly, it should be immersed in a pail of water kept at 90 C. and adjusted so that it will. The adjustment should not be made by bending the thermoflex strip. If this method of checking or adjustment does not provide the necessary degree of protection to the motor, it can be assumed that the size of the relay heater is not correct.

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A temperature overload relay does not need any such maintenance attention as outlined for dashpots, but its use does involve the observation of certain precautions. Since it is sensitive to temperature, it should not be put in a strong draft, such as that from a window or a circulating fan. If it is necessary to place it in such a position, it should be shielded by a cover.

Conversely, a temperature overload relay should not be located above a source of heat, such as steam pipes. In brief, the relay should be in an ambient temperature that does not differ greatly from that of the motor.

TIME DELAY RELAY

The third type of relay is used for controlling the rate of acceleration of motors and for many other functions where a short-time-delay is needed. In the escapement type of relay, a pendulum is used as the governing means, which makes it necessary to mount the relay in a definite position with respect to the motion of the pendulum.

It is not always possible, however, to mount the relay in the proper position, and when it is in the out-of-true position it is less dependable. Shortening the pendulum makes it possible to tip the relay further from the vertical, but the shorter pendulum results in a shorter time delay.

To overcome this limitation a new design that has a balanced pendulum has been made available. The variation in time is obtained by changing the length of the stroke. In principle the two devices are the same, but mechanically they are quite different.

If the old-type escapements fail to time properly, their mounting position should be checked. However, if the application is such that it is difficult to mount and keep the relay in the proper position, use of the balanced type should be considered.

WHEN CORROSIVE GASES ARE AROUND

Corrosive fumes in many plants, such as those manufacturing rayon, coke, sulphuric acid, nitric acid, chlorine, and so on, rapidly attack the metal parts of control devices and render them inoperative.

To overcome this trouble all the operating parts are frequently immersed in oil in a container capable of withstanding the corrosive atmosphere. The container is made either of cast iron or of heavy boilerplate steel, which is given a protective coating of a paint that is capable of withstanding the fumes of gases encountered.

When it is impracticable to oil-immersed a given type of control, the equipment is enclosed in a heavy case with a tight, gasketed cover. The enclosing case is protected with a suitable corrosion-resisting paint.

Know the Equipment

Control equipment can be quite simple or very complex, and the job of the maintenance man is easier if he has available instruction books and wiring diagrams covering every piece of control and every circuit for which he has responsibility. Extra coils and contact tips should be kept on hand as well as a complete list of spare parts. Maintenance is simplified considerably if the maintenance man makes a practice of becoming thoroughly familiar with the circuits and operation of each new controller as it is installed in the plant.

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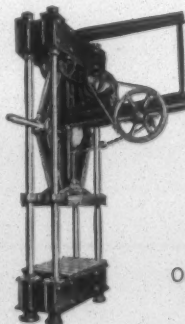
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Index to Advertisers

	Page		Page
-A-		-J-	
Acme Steel Co.	6	Jenkins Metal Co.	33
Adelphia Hotel	45	Johnson Chemical Co.	38
Akron Belting Co.	39		
American Moistening Co.	28	-K-	
Arkansas Co.	8	Keever Starch Co.	41
Armstrong Cork Co.	3		
-B-		-L-	
Bahnson Co., The	21	Loper, Ralph E.	38
Bailey & Co., Joshua L.	36	Luttrell & Co., C. E.	35
Barkley Machine Works	21		
Bay State Textile Co.	35	-N-	
Becco Sales Co.	7	National Aniline & Chemical Co.	17
Brewerton, C. H.	40	National Ring Traveler Co.	43
Brooklyn Perfex Corp.	35	Neisler Mills	36
Burkart-Schier Chemical Co.	33	N. Y. & N. J. Lubricant Co.	Front Cover
		Norlander Machine Co.	42
-C-		-P-	
Carolina Refractories Co.	28	Pease & Co., J. N.	32
Charlotte Chemical Laboratories, Inc.	28	Piedmont Color & Chemical Co.	42
Cleveland Mill & Power Co.	28		
Clinton Co.	23	-R-	
Corn Products Refining Co.	23	Rice Dobby Chain Co.	51
Cundiff, John O.	35	Rose & Co., E. F.	44
Curran & Barry	36		
-D-		-S-	
Dary Ring Traveler Co.	44	Seydel-Woolley & Co.	25
Dunkle & Co., Paul A.	39	Sjostrom Machine Co.	42
Dunning & Boschert Press Co.	33	Sonoco Products	2
DuPont de Nemours & Co., E. I.		Southern Standard Mill Supply Co.	35
R. & H. Dept.	5	Stein, Hall & Co.	21
		Stevens & Co., Inc., J. P.	36
-E-		-T-	
Eaton & Brown	35	Terrell Machine Co.	25
Engineering Sales Co.	33	Textile Apron Co.	37
		Textile Industry Research	28
-F-		Texwood Mfg. & Sales Co.	43
Fulbright Laboratories, Inc.	42	Todd-Keesee Belting & Supply Co.	44
		Truitt Bros.	42
-G-		-U-	
Garland Mfg. Co.	40	Upchurch & Sons, C. L.	47
Gastonia Belting & Supply Co.	38		
Gill Leather Co.	15	-V-	
Gossett Machine Works	38	Valentine & Co., J. W.	37
Greensboro Loom Reed Co.	40	Veeder-Root, Inc.	Back Cover
Greenville Belting Co.	35	Victor Ring Traveler Co.	44
Gulf Refining Co.	10	Vogel Co., Joseph A.	51
		-W-	
-H-		WAK Industries	23
Houghton Wool Co.	23	Walker Mfg. Co., Inc.	21
		Watson-Williams Mfg. Co.	40
-I-		Wellington, Sears Co.	36
Iselin-Jefferson Co.	36	Whitin Machine Works	4
		Whitinsville Spinning Ring Co.	51
		Wolf & Co., Jacques	19
		Windle Co., J. H.	35

Cotton Spinning Operations Expand

Washington, D. C.—The Census Bureau reported that the cotton spinning industry operated during April at 135.3% of capacity, on a two-shift, 80-hour-week basis, compared with 134.3% during March this year, and 120.1% during April last year.

Spinning spindles in place April 30th totaled 24,073,448, of which 23,100,202 were active at some time during the month, compared with 24,058,066 and 23,096,479 during this year, and 24,434,380 and 22,787,396 during April last year.

Active spindle hours for April num-

bered 11,462,971,594, or an average of 476 hours per spindle in place, compared with 11,374,085,305 and 473 for March this year, and 10,289,344,204 and 421 for April last year.

Spinning spindles in place April 30th included: In cotton-growing States, 17,952,578, of which 17,497,752 were active at some time during the month, compared with 17,955,068 and 17,484,645 for March this year, and 17,965,040 and 17,298,344 for April last year; and in the New England States, 5,418,926 and 4,966,880, compared with 5,405,594 and 4,971,328; and 5,757,688 and 4,973,152.

Active spindle hours for April included: In cotton-growing States, 9,-

166,457,878, or an average of 511 hours per spindle in place, compared with 9,114,290,940 and 508 for March this year, and 8,115,916,589 and 452 for April last year; and in the New England States, 2,052,052,493, or an average of 379, compared with 2,008,995,992 and 372; and 1,994,055,301 and 346.

Alabama, 956,984,605 and 522; Georgia, 1,547,226,901 and 493; Mississippi, 70,251,180 and 445; North Carolina, 2,824,922,466 and 486; South Carolina, 2,911,926,427 and 538; Tennessee, 338,168,003 and 615; Texas, 112,108,314 and 463; Virginia, 317,112,962 and 499.

Used Machinery May Be Sold

Sale of used or reconditioned machines for the textile manufacturing industry, valued at \$500 or less, may be sold without specific authority from the War Production Board under an amendment to the order freezing new equipment for this industry, according to a report by J. E. MacDougall, manager of the WPB's priorities field service office in Charlotte. He said the order continues to require priority authority for sale of new machinery, regardless of value.

Six Mill Towns Gather Scrap Iron

West Point, Ga.—More than 100,000 pounds of scrap metal and old rubber was collected in the "Salvage for Victory" drive conducted in the six Valley towns, West Point, and Lanett, Shawmut, Langdale, Fairfax, and Riverview, Ala.

Tires Wear Out Twice As Fast During Summer

New York.—The motorist who carefully saved his tires through the winter and plans (if he gets gasoline) to tear out on a vacation and a lot of week-ends this summer had better watch out, the Rubber Manufacturers' Association warned.

Summer driving is twice as hard on tires as winter travel.

"The sad fact is that you get only half the mileage from your tires in summer that you do in winter," the rubber makers said.

"Every mile you drive in July will wear out your tires as much as two miles of driving in January."

The association passed on a tip from manufacturers that inflating tires two pounds more than previous recommendations would be helpful.

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Cotton Good Markets

New York.—Developments are breaking so rapidly, and conditions are reversing the field so consistently, that market observers can be sure of being right on only one thing—that things won't be the same long. It is literally impossible to take any sort of a long time view of the market under present conditions, as has been demonstrated. A glance back over market predictions covering the past year or two is interesting reading, if for no other reason than to see how many persons have been wrong, even though through no fault of their own. An expert opinion today as to action to take for the next ninety days might be completely set aside and made to look ridiculous by a government edict issued tomorrow. It's anybody's guess.

When the market price ceiling for cotton goods was pegged to a base price of cotton at above 20 cents, it was freely predicted that cotton would go above that price and that mills would lose money. Since that time, however, cotton has gone down, and as of May 25th it was selling at 19.64 cents in the ten markets accepted as setting the average price. This represents an additional mill profit, because with the present market there is certainly no incentive for mills to sell below the ceiling.

When the order L-99 has been thought over, and a ray of hope was seen for getting burlap out of India through a new route not menaced by the Japanese, it was freely predicted in the market that the supplies of bagging material provided for in L-99 would become a glut on the market and would be unsalable. T. M. Bancroft, chief of the carded cotton fabrics unit of the War Production Board, counters this claim with one of his own in which he states that the entire production of bag osnaburg and bag sheeting provided for in the conversion order will be used for minimum needs of the military and agricultural interests.

Mr. Bancroft said that some months ago the Defense Supplies Corp. was authorized to purchase large yardage of bag osnaburg and bag sheetings for stockpile, but because of the great need of bags for agricultural products and the limited supply, only a very small yardage was purchased.

The situation has not changed. The Defense Supplies Corp. still stands ready to make such purchases, but no offers have been received.

There will probably be a great deal of waste material come out of the conversion order. Some mills just can't convert with any degree of efficiency. Without any specific instructions of what is to be made, and with a choice of a number of constructions to pick from, there may be cases of an excessive amount of one construction and a shortage of another.

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Cotton Yarn Markets

Philadelphia.—Mills are getting more and more into work going into Government work either directly or indirectly, and are finding that Government red tape may at times be a terrific nuisance. For example, a Government order for 50 pounds of yarn requires the same amount of detail work in completing the sale as an order for 50,000 pounds. Where sub-contractors are called on for yarn then as many as ten or more prime contractors' preference rated numbers are attached to the formers' papers. All this is called far too much trouble to justify the time and effort needed to fill so many of the comparatively small orders which come to hand.

There are other yarn users whose major requirements are for other kinds of materials. But, there is the desire to be reassured regarding yarn supplies over the remainder of the year. Lacking Government contracts, meanwhile, some larger buyers have asked for the right to place contracts with the proviso that rated numbers would be furnished to enable spinners to prepare to ship periodically, as often as once a month. So far such indefinite propositions apparently have not found ready sellers. The view is that should the Government fail to give the needed orders to the yarn buyers the necessity would be to hold back the periodic shipments.

Nearly always yarn spinners on inquiry say they are unable to take even certain kinds of Government business of prime importance. Some claim they are sold ahead into October and a few through the rest of the year. Instances have come to notice where buyers with civilian contracts are informed that their goods will most likely receive production and delivery consideration after the war. Where this has been noted the mills concerned are reported tied up with military operations. Buyers who are treated in this manner are saying that they are convinced that they are being misled as to the true facts. They are aware of some individual mills being so placed, but doubt that the situation is as general as it is made to seem.

There is some question in spinners' minds as to how long the present heavy rate of production is going to hold up. Machinery is taking a terrific beating in most cases, with not sufficient time for practical upkeep even if there were not a shortage of mechanical workers for doing this job. The textile machinery manufacturers are all devoting most of their capacity to war production and machinery cannot be replaced.

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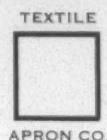
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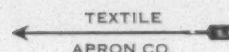
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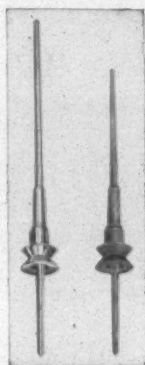
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Minority Opinion On Important Labor Decision

(Continued from Page 11)

agency, we cannot subscribe to any national labor policy which compels an unwilling employer to force an unwilling employee either to join or to remain a member of a labor union in order to play his part in winning this war. If this position is taken by a Government agency and a national labor policy is thus established, then Government must of necessity accept the responsibility of the supervision of that labor organization to which it forces an employee to pay dues, fines and assessments. If this position is taken by Government, then Government, in effect, exacts taxes from an individual citizen to be paid to a private organization for the privilege of working.

Acting as employer representatives of the National War Labor Board, we cannot subscribe to such a policy.

The employer members presented two proposals, both of which the majority rejected, which can be summarized as follows:

(1) That the company shall insert a provision in the contract with the union making continuance of membership a condition of employment for all union members who voluntarily certify in writing thereafter their willingness to remain members of the union during the life of the contract.

(2) That if the company is directed to insert a provision in the contract requiring union members who are employees to maintain their membership in the union in good standing as a condition of employment, then after such contract is entered into each employee who is a union member shall be given a definite opportunity, within a stated time, to resign from the union. If he fails so to resign, he would then be required, as a condition of employment, to remain a member of the union in good standing for the contract period.

The majority of the Board, by rejecting both of these proposals, have made it clear that they do not concede the right of the individual worker an opportunity to resign from the union. On the other hand, by failing to provide an "escape" clause, as suggested in (2) above, they are deciding that employees who are already members of the union must be conclusively presumed to have agreed, when they originally joined the union, that their jobs would for the duration of the union contract, depend upon the continuance of union membership. We are not willing to ascribe any such state of mind to those employees who are already members of the union, and in our view the only fair and practical way to determine the intention of individuals who have already joined is to give them the opportunity to remain in or resign from the union. We submit that the right to resign from a labor organization is exactly the same as the right to join or not to join in the first place.

In the Walker Turner and the International Harvester cases, and now in this case, the employer members have reiterated their belief that harmonious and co-operative relations between the management and employees, so essential to production, cannot be obtained by an administrative board compelling an employer and a union to enter into any agreement which deprives the worker of the opportunity to decide for himself whether or not he wishes to remain a member of a labor organization as a condition of continued employment.

The majority have stressed that the union security provisions now ordered by them are necessary to efficient production in this shipyard. This is contrary to the clear facts in the case. Since the Navy turned the plant back to the company at midnight on January 6, 1942, the company has been exerting all its efforts to product vessels so essential for national offense. This company has been in the shipbuilding business for over 25 years and it is noteworthy that on or about January 9th last, the Navy Department asked this same company to construct and manage a second shipyard devoted to turning out more vessels for national offense. This company, doing work vital to our war effort, is well ahead of schedule at the present time. No such contract provision as now ordered is necessary to achieve that result. The imposition of such a provision on management and employees, against their will, may well result in the very opposite of what the majority so confidently predict:

RORER D. LAPHAM,
H. L. DERBY,
E. J. McMILLAN,
H. B. HORTON.

Card Speeds, Maintenance, Conversion, On Program of Eastern Carolina Division

(Continued from Page 16)

hours and 55 minutes, while on the fast card it was 3 hours and 15 minutes. We ran out 40 minutes quicker than we did on the slow card. On the doffer it ran 60 minutes on the slow and 50 minutes on the fast, or a difference of 10 minutes there.

I have one of Mr. Dunlap's charts here, which he made. I believe about the only difference in the two tests is that they got better breaking strength and had less waste. The highest speed Mr. Dunlap had, I believe, was 196 R.P.M.

I do not know of anything else to add, Mr. Chairman.

Chairman Gilliam: This is a very interesting bird's-eye view of the situation that Mr. Marley has given us, gentlemen. If any of you are interested in speeding up your cards you might ask him about it.

When you went into this, Mr. Marley, was it with the idea of getting more work from the cards?

Mr. Marley: Yes, sir. If it did not do any damage to the cards, that was what we wanted to do. We were trying to hit at 20 per cent.

Chairman: In making those changes did you reduce your production gear?

Mr. Marley: No, sir, we just left that the same. We just speeded up the whole thing in proportion.

Chairman Gilliam: You just got more work through your card?

Mr. Marley: Yes, sir.


Mr. Gilliam: What percentage of increase did you get in your production?

Mr. Marley: We were hitting at 20 per cent and did not miss it very far.


Chairman Gilliam: You mentioned some of your settings. What were your flat settings?

Mr. Marley: I have a memorandum of them somewhere.

Chairman Gilliam: I imagine a lot of us are like Mr.



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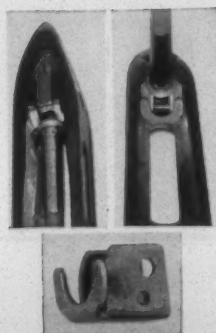


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Chairman Gilliam: You changed them some, in general?

Mr. Marley: No, we did not change any settings. I have all the settings, if you would like to have them.

Chairman: Yes, you might give them to us.

Mr. Marley: Doffer from cylinder, .007; front plate, top .028, bottom .034; back plate, top .017 and bottom .022; licker-in to cylinder, .007; mote knives to licker-in, .010; feed plate to licker-in, .012; flats, .010; stripper comb, .022; cylinder screen, front 3/16", middle .034, back .022; licker-in screen, 5/16"; feed plate to feed roll, clearance, .005; plate between cylinder and doffer, top and bottom, .022.

C. S. Tatum, Gen. Mgr., Pilot Mills Co., Raleigh: I want to ask a question about that. I notice the waste is increased by a little more than 1 per cent.

Mr. Marley: Yes, 1.15 per cent.

Mr. Tatum: In 100,000 pounds production, that is over 1,150 pounds you would lose there, and at 21 cents 1,000 pounds would be \$210. You could run your cards on the week-ends and pay time and one-half and get more production and it would be less expensive.

Mr. Marley: We are doing that already, but we need more.

Mr. Tatum: If you were not running over the week-end you could still do it more economically?

Mr. Marley: Yes, sir.

Mr. Tatum: If you were not running week-ends it would not pay you, economically, to run your cards faster, because of that increased cost in waste, would it?

Mr. Marley: Of course, you have your reworkable waste.

Mr. Mullen: How long have you been running that? What I want to know is how long the card will stand that speed.

Mr. Marley: They have been running about three weeks now.

Mr. Mullen: Do you notice any difference?

Mr. Marley: We cannot tell any difference in it at all.

Mr. Mullen: Nothing has broken down?

Mr. Marley: No, sir.

Chairman Gilliam: How old is the clothing on that card?

Mr. Marley: Seventeen years.

Chairman: Is any of it showing loose?

Mr. Marley: No, sir. I think some of the old clothing we have is better than the new clothing.

B. Ellis Royal, Sec'y., Southern Textile Association: I know of a mill in Georgia that has been running at high speed for about eight years with no apparent injurious effects.

Mr. Marley: The only difference we could tell was that we had a little more rattle in the card head.

Mr. Royal: I wonder how the speed of 165 R.P.M. for cards was established. Does anybody know?

A Member: I guess that is what the first manufacturer put on his and it has just been continued.

Chairman: Mr. Honeycutt, haven't you had some experience on speeding up cards?

W. T. Honeycutt, Overseer Carding, Sterling Cotton Mills, Inc., Franklinton, N. C.: We speeded up our whole card room. We have all our cards speeded up; we went from 165 R.P.M. to 185. The only test we made was that we ran three cards at that speed for five weeks, to see whether we could do it or not. Our breaking strength was practically the same, and we seemed to have as good carding, and Mr. Gilliam just decided to change the whole thing over. We have been getting pretty good results, I think.

Chairman Gilliam: One of our reasons for that is that we were getting practically the same production through the card but we speeded up the production gear, and when we speeded up the whole card we also speeded up the cleaning parts of the card and reduced our production gear two teeth, which we felt gave us two additional teeth of cleaning there. So we were able to reduce the production gear two teeth and still get the production through those cards.

There is one thing we found which might be of interest to some of you. Mr. Marley, is your drive on those cards motor driven or what?

Mr. Marley: We have one motor drive and one large shaft.

Chairman: Did you find that you consumed much more power there?

Mr. Marley: We cannot tell much difference in it, Mr. Gilliam.

Chairman Gilliam: We have 60 cards and had a 55 H.P. motor and another motor running those cards. Apparently we were getting on all right but when we increased the speed it ran about 12 per cent, I think, and

we found that our motors could not pull it and we had to put in a 25 H.P. motor and take some of those cards off. Of course, you might have had some surplus power there, but we were right up on our available motor power and had to do that. We had the electrician come in and make a test, and he said the motor was overloaded. Since we have put in the new motor we have gotten on finely.

D. E. Long, Overseer, Oxford Cotton Mills, Oxford, N. C.: I understand the situation is that Mr. Marley went into this thing because he had to have more production, Mr. Chairman, and you went in from the standpoint of cleanliness and quality?

Chairman Gilliam: Well, both.

Mr. Long: Your one viewpoint was quality?

Chairman: Well, we were trying to help that, yes.

Mr. Long: Has the quality of your work improved enough to pay you for the increased cost?

Chairman Gilliam: Well, actually there is not any increased cost there except probably a little bit more waste. But we do not pay the help any more on those cards; they are getting the same amount for running a set of cards. I think the improvement in quality is worth while, because I think none of us are making any too good quality nowadays, and anything we can do to help it, even if it costs a little more, is worth while.

Mr. Long: You know, since the Government is telling us what we have to pay, anyway, many of us have gotten the idea that labor cost is the only thing we have to watch. But Mr. Tatum brought out the point there that this excess waste that you carry back and put into your product is expensive.

Chairman: As Mr. Marley brought out, you have the increased production.

Mr. Long: But you do not get the increased production. You have the increased waste and do not have the increased production.

Chairman Gilliam: I imagine a lot of us are like Mr.



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Marley in that we need increased work from the cards and have to get it.

Mr. Long: The only point I wanted to bring out is the question, where you do not increase the production, is the effort worth the cost?

Chairman: I must admit that we did not go into it quite as elaborately as Mr. Marley, but we are fairly well pleased with the results.

Mr. Marley: I might add one thing, Mr. Long. I did not have the machine for putting the yarn on the black-board such as Mr. Dunlap had. Our machine happened to be at another mill. But just from looking at it, as best we could judge, it looked better. I am not taking just my own judgment on it, because I took the samples and gave them to different ones who did not know what they were looking at. Of five different persons, only one of them picked the slow-carding product to be better than the other, and he did it in only one case. It certainly seems that it showed up better, just from that.

Mr. Royal: On the increase in waste, wouldn't the same thing work from a quality standpoint? If your cards are adjusted to take out 6 per cent, couldn't you set them to take out only 4 per cent?

Chairman Gilliam: Yes, you can do that.

Mr. Royal: You have to arrive at a quality standard somewhere.

Mr. Tatum: The point is that the extra waste is from the extra speed in beating that cotton, which would naturally make more fly.

Mr. Royal: As I understand, the higher card speed gives better appearance, which would indicate that it is cleaned better.

Mr. Marley: Of course, there is one point on the thing; one thing you are trying to do, in addition to speeding it up and getting more production, is getting better work. If you are going to get better work, of course, you are going to have to take out a little more.

Mr. Mullen: It might not be so important when you can sell anything you can make, practically. But in the days to come, when you are going to meet competition, then that quality is going to sell one man's product when another man cannot sell his.

Mr. Honeycutt: We weighed our card waste each day and cannot tell much difference in the waste we sent back to the picker room. It is practically the same as before we changed the cards. We always have some waste. Some days we have a lot of waste and other days not so much. It has been that way ever since I have been in the mill. Of course, if the gentleman is talking about the motes, that is different. We card ours right much quicker than we did and I think get a better quality of work.

(To be continued in next issue)

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Du Pont Branch Congratulated On Salvage Program

Lessing J. Rosenwald, Chief of the Bureau of Industrial Conservation, has congratulated the War Production Drive Committee of the Grasselli, N. J., plant of E. I. du Pont de Nemours & Co. on its report of an outstanding salvage campaign.

Mr. Rosenwald wrote the joint labor-management committee:

"My attention has just been called to the salvage record established by your War Production Drive Committee. Please accept my congratulations for an achievement that sets a splendid example to industrial plants of America."

The labor-management committee reported that the salvage campaign in one month netted the following materials:

- 100.5 tons of scrap iron.
- 9.5 tons of hard lead.
- 5.25 tons of copper.
- 3. tons of brass.
- 1.75 tons of aluminum.
- 1.75 tons of stainless steel.
- .25 tons of monel.

In addition, receptacles for rubber placed throughout the plant gathered 1,073 pounds of scrap rubber.

Details of the report follow:

"The company formerly burned off the rubber insulation from copper wires and cables so as to salvage the copper. It now salvages the rubber by squeezing the wire or cable through a set of rollers, thus permitting the rubber to be easily removed from the wire.

"All the short stubs of welding rods are saved for return to the welding supplier for credit.

"All worn out or broken steel punches, dies, drills and high speed tools are salvaged.

"On its lead-burning operations, it is supplying the lead-burners with wooden buckets so that the lead scrapings can be salvaged.

"All burned out electrical fuse cases are collected and returned to the manufacturer for refilling.

"Dry cell batteries of all types, including flashlights, are collected when worn out for the zinc salvage.

"All waste burlap is being collected.

"Wiping rags are being collected when dirty and are being washed for reuse.

"Metal motor covers, couplings guards, machine guards and brackets are being standardized to conserve steel.

South Carolina Group Discusses War Problems, Worker Training

(Continued from Page 18)

Chairman Lockman: I have seen some pillow tubing run but never bags.

Is there anything else?

Mr. Hammond: Mr. Chairman, going back to the matter of rubber substitutes, we have this substance called Koroseal, and I have seen cots made of that. They are very thin.

Mr. E.: Speaking of leather cots, it is very thin leather, and they say they get about 25 per cent longer life from their rolls in that way.

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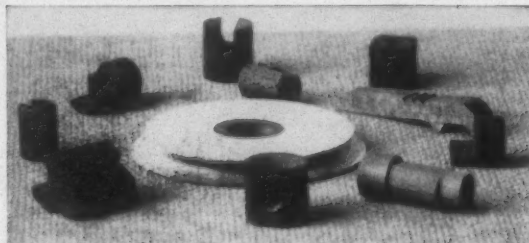
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Chairman Lockman: What ruins rolls? Is it actual wear or hard ends or what?

Mr. E.: I guess most of it is from hard ends. They lap up.

Chairman Lockman: The reason I asked is because I wonder if there would be a saving. What ruins most rolls, Mr. Splawn? Is it grooving or what?

Chairman Splawn: I guess grooving ruins a good many of them, and then lack of oil.

Chairman Lockman: Is it a fact that you very seldom wear a roll out?

Mr. Splawn: I wear a good many of them out.

Chairman Lockman: I am not a spinner.

Mr. Cobb: Does anyone know what will keep a calfskin-covered roller from lapping up?

Mr. Splawn: A good clearer cloth is one thing.

A Member: High humidity is another.

A Member: Good running spinning is another.

Mr. Cobb: I know mine lap up, and when an end comes down what makes it go around the bottom clearer or the scavenger roll instead of the top clearer? If somebody can tell me that I wish he would; if not, keep quiet.

Chairman Splawn: I believe the conditions in the room are the biggest thing.

Mr. Cobb: Yes, I know that. And the human element.

Mr. Jones: A chrome tan will give you less static than a bark tan.

Mr. Cobb: I am using chrome tan. My next point is that some improvement should be made in the leather. That is what I was trying to get to, and I thought perhaps somebody would know about it. My opinion is that there should be some improvement made in the calfskin leather to keep it from picking up that end. If the wind blows on it or if the room gets beyond control a little bit it will lap up, and you will have more rolls ruined from ends lapping up than from any other cause. It is expensive. If a girl has to run a lot of spindles you know what it means. It takes time to do it, and the roll will be ruined by the ends lapping up.

Mr. Royal: Have you tried sheepskin?

Mr. Cobb: I had sheepskin before I used calfskin. I have been thinking of trying something else, but it is a guess.

Frank D. Lockman: Mr. Cobb, when you said the wind would blow and cause it, it occurred to me that you might take a rod and run it all along your transoms and then regulate the wind in that way.

Dean Willis: Have you tried pushing the front top roll a little farther forward?

Mr. Cobb: No.

Dean Willis: Try that and see if it helps.

Mr. Cobb: I believe the stationary top clearer helps in keeping it down, but I have a revolving top clearer, and that makes it worse.

Frank D. Lockman: It absolutely does.

Mr. Cobb: But there are so many other things that the revolving clearer does that I think it makes up for that.

Chairman Lockman: Are there any other questions?

Mr. Royal: I should like to ask a question. I do not remember the last war, and I should like to ask some of the superintendents who do, what was the percentage of men and women spinners in the mills during the last year, and how much the percentage of women increased.

Mr. Clark: I think I can answer that. I do not think it made any difference last time. We were not pushed up on either the draft or on employees. During the last war we were producing about 7,000,000,000 yards of cotton goods a year. Now the Government is asking us for 14,000,000,000 yards this year and 15,000,000,000 next year. We did not have to use women in place of men in the last war.

A Member: And we had only one shift.

Mr. Clark: That is right.

Chairman Lockman: Is there anything else?

Gentlemen, I appreciate your entering into the discussion this morning. As I said, I am new, and I felt a little funny when I first got up, but think we had a good discussion after all.

Have you any announcements, Mr. Royal?

Mr. Royal: Whereas the annual meeting of the Southern Textile Association has been held in the past either at Myrtle Beach or at Blowing Rock, we decided to have it this year in Charlotte, on account of the tire shortage. It will be held June 12th and 13th, Friday and Saturday.

Chairman Splawn: Gentlemen, we appreciate your coming out, and I think we have had a pretty good meeting. I have learned one thing from it, and that is that crossed ends are not caused on the warpers. Some of these weavers I know are going to dispute that with me.

We appreciate having Lieutenant Traynham here to tell us about defects in Army goods. As he said, he will show you a few samples with defects in them and will be glad to give you any further information you want.

We were to have had a report this morning from Mr. G. H. Dunlap, the research man for the Textile Foundation and the Southern Textile Association, but we had a wire from him saying he was held up in Washington.

Does anyone else want to say something?

John T. Wigington, Director of Research, Cotton Textile Institute, Inc., Clemson: This is John Wigington, from the Cotton Textile Institute. Some time ago we created a division of research, not to try to do a lot of research but to keep up with the research work done by the Federal Government in fibre testing, etc. From time to time we shall send out a lot of literature to your presidents and superintendents. We hope you will ask them about it from time to time, because we think it will be of help to you. I make my headquarters at Clemson, S. C., and I shall be glad to see you there at any time.

Chairman Splawn: Thank you, Mr. Wigington.

Does anyone else want to say anything? If not, we stand adjourned.

(Thereupon the meeting adjourned, at 12:03 o'clock P. M.)

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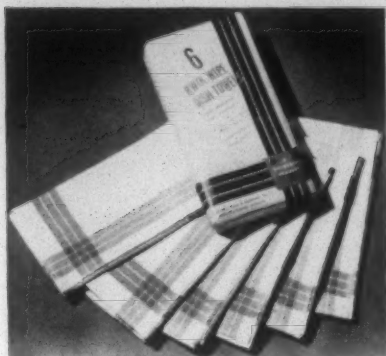
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Two New Sizes Of Link-Belt Conveyor

A new 32-page illustrated catalog and data Book No. 2075 on the Link-Belt Bulk-Flo elevator-conveyor has been published by Link-Belt Co., Philadelphia, Chicago, San Francisco.

Two new sizes are included, as compared with the catalog that the company issued when it first announced this new bulk conveying system, last June. Power formulae and other engineering data have also been added.

The book contains diagrams showing paths of operation, gives a long list of materials that can be handled, and contains illustrated case studies, with tables of sizes, capacities, dimensions, etc.

Not yet a year ago Bulk-Flo was announced as "a distinctly new and different power-operated conveyor system for the positive and continuous conveying of flowable granular, crushed, ground or pulverized materials of a non-corrosive, non-abrasive nature."

A copy of new Book No. 2075 will be sent to any interested reader upon receipt of request made on business letterhead.

"Preventive Maintenance"

The April issue of the *Atwood Twists*, published by Atwood Machine Co., of Stonington, Conn., is devoted to "preventive maintenance," and deals with the care of Atwood Spindles, Swings and Idlers. Following issues of the paper will carry suggestions for the maintenance and care of other Atwood equipment.

"Fifty Years Of Chemical Progress"

Commemorating its fiftieth anniversary, the Mathieson Alkali Works, Inc., has published a 48-page booklet entitled "Fifty Years of Chemical Progress."

The booklet traces the growth of the Mathieson organization and describes the company's major developments, which include the introduction of liquid chlorine and synthetic ammonia, the preparation of new chlorine carriers, bleaching agents, and detergents, and the production of alkalies of an exceptionally high degree of purity. Numerous illustrations show the scope of the company's present operations.

Copies of the booklet can be obtained, as long as the limited supply lasts, by mailing requests to the Mathieson Alkali Works, Inc., 60 East 42nd Street, New York City.

Arrangement for Load-Center Distribution Systems

An eight-page publication (GEA-3759), recently issued by General Electric, gives information to help in the selection of the proper arrangement of Load-center Distribution System to fit individual requirements of industrial plants, shipyards, naval and military projects, and commercial buildings. Described in the bulletin are the characteristics of the four load-center system basic circuit arrangements—the simple radial circuit, the primary selective circuit, the secondary selective circuit, and the secondary network arrangement.

Victory Sash

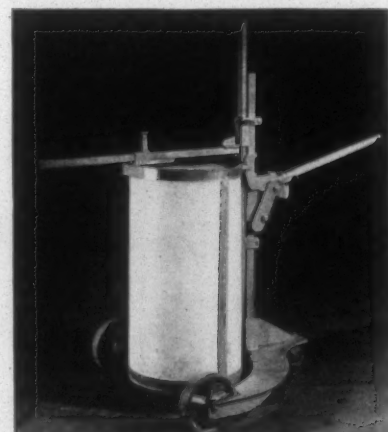
With the Government's restriction of the use of steel wherever possible to expedite manufacture of ships, guns and munitions, an entirely new type of wood sash has been developed by a member of the firm of Albert Kahn Associated Architects & Engineers, Inc., of Detroit, which, it is said, will serve for industrial and other buildings

quite as well as the standard steel sash employed these many years.

In order that the new sash may be available to all architects, engineers and contractors engaged in designing and building war production plants, John Schurman, its designer, and the Albert Kahn organization of which he long has been a member have waived all patent rights to the development. Blueprints describing the new sash in detail are available to the entire war production building industry, it was announced by Albert Kahn, head of the firm.

Certain that the new development will play an important part in winning the war, the sash has been named "Victory Sash." All who have examined it declare it to be ample in strength and very economical of construction.

New Ernst Carrier

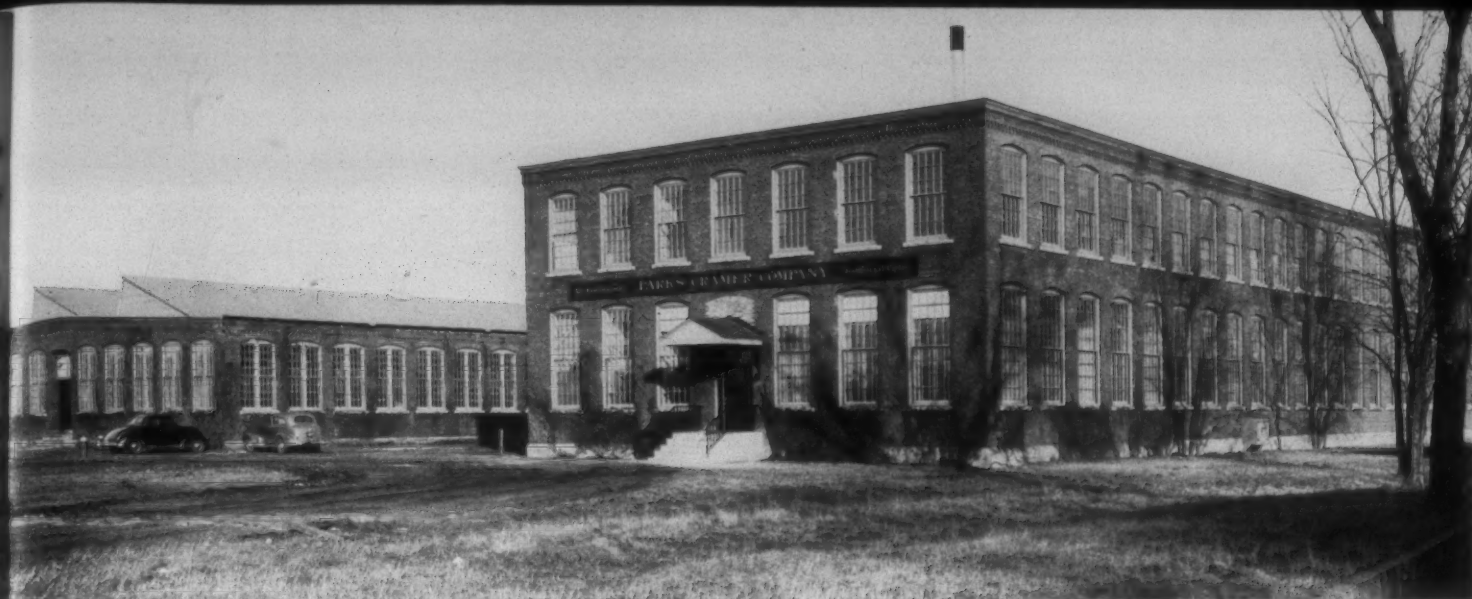


The new Ernst Drum and Barrel Carrier has just been announced by the Ernst Magic Carrier Sales Co., Buffalo, N. Y.

This new model is designed to handle light wood, fiber, paper barrels and "one-trip" light gage steel containers with or without chimes. Its capacity is 800 pounds and will accommodate drums and barrels from 14 to 24-inch diameters.

Three-wheel construction automatically balances the load for safer and easier moving of containers. Operation is so simple that one man can attach the clamp, pull down on the handle, lift the container off the floor a few inches, and move it any distance. Another important feature is the straight, vertical lift of the barrel from the floor to prevent any flowing over of contents from open-head containers.

Full information on the complete line of Ernst Drum and Barrel Carriers is available by writing to the Ernst Magic Carrier Sales Co., 1456 Jefferson Ave., Buffalo, N. Y.



New Fitchburg, Mass. Plant of Parks-Cramer Company

The floor space is approximately 65,000 square feet. The main building at the right houses the executive, engineering, and local offices, and merchandising stores. In the rear bordering a spur track is a storehouse for heavy material; east of that, a coal pocket and coal hoist.

The building appearing on the left is a machine shop. Each machine has individual motor drive.

Prior to their purchase and complete modernization by Parks-Cramer Co., these buildings were occupied by the Shireffs Worsted Co.

G-E War Production Greater Than for Entire World War

"General Electric has produced already more war goods for the present conflict than the company turned out during the entire first World War," said Charles E. Wilson, G-E president, in a statement recently.

"Virtually everything that we now make is for war, and every practicable means is being employed to increase production still further. This will not be difficult if every employee can be made to see his personal stake in the war.

"To our already vastly expanded facilities are being

added five new plants on which work has started since Pearl Harbor. Men and women are now being trained to staff these plants the day that they can go into production.

"We now have the largest number of employees in the history of General Electric. The majority work more than 40 hours a week; some of them work 60 hours. The average for our largest plant is 47.7 hours a week per worker.

"Where production can be expedited by three-shift operation, it has long been on that basis. Because of a lack of skilled help, two men rather than three men cover the 24-hour period in many departments."

PICKER APRONS—*New and Rebuilt*

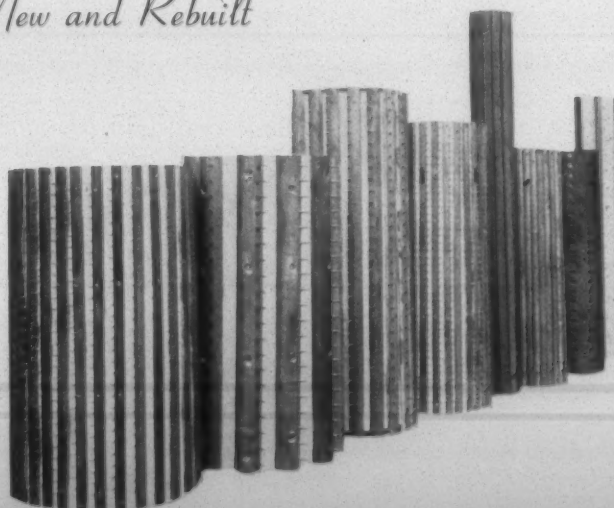
We suggest that you have your aprons either replaced or repaired now. Copper rivets, burrs, steel spikes and pins are harder to get each week, so telephone, wire or write us your needs. Ship your aprons to us for repair. Our motto, "Better Built Picker Aprons" guarantees your satisfaction.

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For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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AKRON BELTING CO., THE, Akron, O. Sou. Reps.: The Akron Belting Co., 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S 2nd St., Memphis, Tenn.

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AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkinson Blvd., Charlotte, N. C.; Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

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AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City. Sou. Rep.: George B. Wilkinson, 613 Johnston Bldg., Charlotte, N. C.

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BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBea Ave., Greenville, S. C.; J. H. Spencer, Mgr.

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BAY STATE TEXTILE CO., 220 Hartwell St., Fall River, Mass. N. C. Agt., John Graham Webb, P. O. Box 344, Hillsboro, N. C. Phone 127-B.

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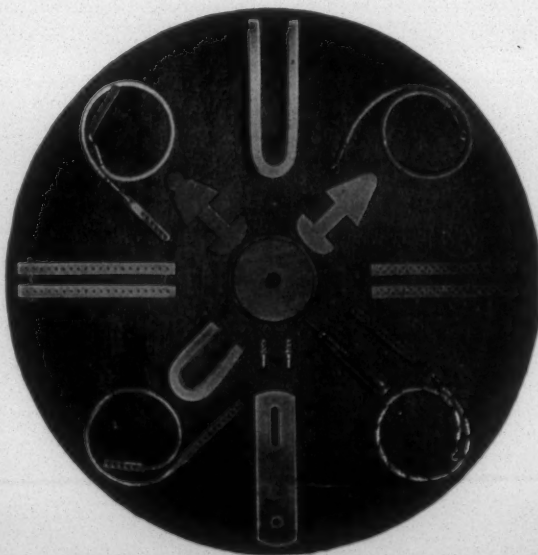
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